HGGT
HARLOW & GILSTON
GARDEN TOWN

RE-IMAGINING HOW WE CAN TRAVEL DIFFERENTLY

JUNE 2024

GARDEN TOWN GUIDANCE

ARUP

Harlow and Gilston Garden Town
Re-Imagining How We Can Travel Differently

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Ove Arup & Partners Limited
8 Fitzroy Street
London
W1T 4BJ
United Kingdom
arup.com

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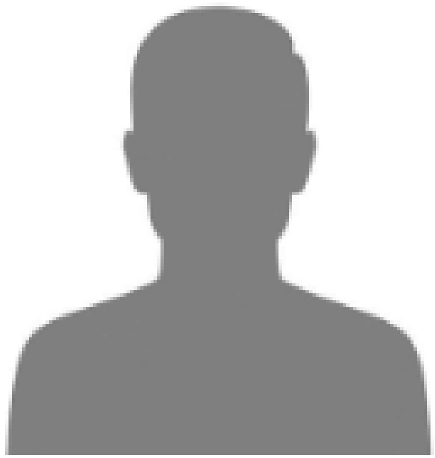


Councillor Dan Swords

Chair of the Joint Committee

Harlow and Gilston Garden Town

Executive Summary

This Framework sets out how the modal transition objectives established in the HGGT Transport Strategy (2022) could be achieved. It aims to guide HGGT and its partner organisations on the types of projects, schemes and interventions that will contribute towards the achievement of the modal transition objectives.

Significant levels of engagement have been undertaken with local authority officers, senior local authority leadership, elected members, developers and other key stakeholders throughout the development of the Framework.

Through detailed interrogation of the existing work plan, it is clear that on the current trajectory, there is low confidence that the highly ambitious targets that HGGT and partners have signed up to will be met within the proposed timeframes. The Framework aims to demonstrate how HGGT may be able to progress on its journey from where it is now to meeting the modal transition objectives.

Significant sums of Central Government-allocated funding has conditioned the need to demonstrate progress towards the achievement of the Transport Strategy modal objectives. Further, a modal transition is critical to realising the Gibberd vision and to ensure a sustainable future for HGGT and surrounding communities.

To assist with planning the transition activities and anticipating outcomes resulting from different initiatives, a logic map was developed to embed the benefits into the outputs, outcomes and objectives. The aim of the logic map is to show a clear rationale between the Transport Strategy outputs, desired outcomes and benefits – all linking back to the stated objectives. This benefits map will ensure that benefits are not viewed in isolation, but rather demonstrate how interventions can generate multiple benefits simultaneously and how benefits may span across different outputs and outcomes. These wider benefits will support the transition by helping to unlock various different funding streams and opportunities, for example around health.

Across the HGGT area, recent surveys have indicated that there is currently a 23% sustainable travel mode share. This means to achieve the Transport Strategy objectives, a more than doubling of the current share by active and public transport modes from today's figures is required. This is equivalent to approximately three times as many sustainable travel trips by 2040.

The optimum path to achieving the modal transition objectives will need to adapt to economic and societal changes and the success of committed infrastructure schemes. Public acceptability and cost are key constraints. If publicly acceptable measures do not achieve the required behaviour change, then higher impact measures or further investment in existing measures may be needed to achieve the desired outcome. Most successful modal transition delivery strategies rely on a mix of better services, promotions, and effective demand management interventions.

The Framework has been set out according to six themes:

- Roads, streets and neighbourhoods
- Increasing bus use
- Increasing shared mobility and active travel
- Targeted engagement programmes
- Rebalancing the cost of travel
- Sustainable freight and deliveries

These themes reflect the key areas of targeted intervention that will contribute to modal transition in HGGT. None of these themes alone will deliver the modal transition objectives for HGGT, however, delivering a mixture of interventions across all the themes will result in a more sustainable shift in behaviours. This framework has been developed to enable the future consideration and integration of initiatives that may enhance progress towards modal transition objectives. Ensuring the Framework can adapt as technology evolves, best practices emerge, or political mandate dictates.

Three scenarios were developed to provide an indication of potential pathways to achieving the HGGT modal transition objectives, ranging from falling behind (i.e. BAU), to trailing the target timeframes, to being on-track to achieve the objectives (i.e. Exemplar).

1. Introduction

1.1 Background

Arup has been commissioned by Harlow and Gilston Garden Town (HGGT) to produce a framework to support- the re-imagining of how people can travel differently in Harlow. The purpose of this Framework is to set out how the modal transition objectives established in the HGGT Transport Strategy (2022) could be achieved under different scenarios. This Framework includes a prioritised pathway of transport focused interventions that are either at various stages of planning, design and delivery, or have been developed and identified through this work. All to achieve the ultimate aim of a modal transition to more sustainable modes of transport.

As part of the development of this Framework, stakeholder engagement has been a critical influencing factor. Significant levels of engagement have been undertaken with local authority officers, senior local authority leadership, elected members, developers and other key stakeholders.

One of the key outcomes of the Framework, and the development of it, has been focused on knowledge transfer, with the aim of influencing the organisational approach to the challenge within the five HGGT partner authorities, comprised of ECC, EFDC, EHDC, HDC and HCC. This will be crucial to the effective execution of the Framework and achievement of the modal transition objectives.

1.2 Purpose of this Framework and Approach to Implementation

As stated in section 1.1, a Framework is required in order to give HGGT and its partner organisations a clear pathway to how it will achieve the modal transition.

The Framework has been prepared to guide decision makers in the immediate next steps to be taken along the pathway to achieving the modal transition objectives established within the HGGT Transport Strategy and secured through various planning agreements with developers. It also provides a long-term vision of the types of projects, schemes and interventions that will contribute towards the achievement of the modal objectives.

Whilst significant work has been progressed to date, by a wide range of different partners, the actions within the Transport Strategy and the long- list of transport interventions that have been developed to support the strategy, have not been prioritised in such a way that the impact and relative contribution towards the modal share objectives can be considered and fully understood.

The purpose of this Framework is to give the right level of information to decision makers to enable them to make an informed choice, and have a view on, the pathway to the achievement of the modal transition, which is required to support sustainable development in the HGGT area.

The Framework has sought to review all identified schemes, and using professional judgement, of the consultancy team and local authorities, as well as comprehensive research and benchmarking, to ascertain whether these schemes will be sufficient, in their current form, to meet the objectives.

Through this detailed interrogation of the existing work plan, it is clear that on the current trajectory, there is low confidence that the highly ambitious targets that HGGT and partners have signed up to will be met within the proposed timeframes.

As such, a number of themes around different elements of transport and movement have been investigated to understand where there may be opportunities to develop further programmes and interventions that could be delivered to close the modal transition gap. This is the intention of the delivery pathway – to demonstrate how the HGGT area may be able to progress on its journey from where it is now to meeting the sustainable travel objectives.

These themes have contained within them a wide range of components that could be considered challenging to deliver, socially, technologically, economically (cost), environmentally and politically. It should be noted that the ultimate aim of this Framework is to show what is required to meet the modal objectives. It is recognised that this is one of many outcomes that the authorities involved are seeking to achieve. To address this, we have also developed a benefits map to show how other wider societal benefits can be achieved through the delivery of the theme components.

In summary, the key purposes of this Framework comprise using it as:

1. **A tool to leverage s106 funding contributions from Developers that will support achievement of the modal objectives.**
2. **A mechanism to obtain funding from governmental departments.**
3. **A pathway to discharge the conditions of the Housing Infrastructure Grant.**
4. **A technical base and supporting information for Local Transport Plans (whether they are existing and/or emerging).**

It is important to note that this is a Delivery Framework that is currently unfunded, not a statutory document and significantly extends the scope of the IDP, therefore a clear objective will be to use it as a "hook" to leverage financial support.

The following sub-section overleaf talks about how the Framework has been developed, who the users of the Framework are and how it is intended that they use the Framework in their roles to support the required modal transition.

1.3 Summary of Approach and How to Use This Framework

This Framework has pulled together significant amounts of existing context, through a comprehensive diagnostic review. This has included a review of existing contextual information around HGGT area-wide movement and transport. It has also involved a deep dive into existing plans, policies and strategies which are likely to influence the ability of the five HGGT partner authorities to deliver modal transition. This also included a benchmarking review of similar places that are seeking to achieve similar modal transition outcomes.

Following this diagnostic review, challenges and opportunities have been identified, which have then been worked through into a benefits framework mapping exercise. The objective of this is to illustrate what wider benefits can be realised to improve the lives of the people of the HGGT area and future residents, through the changes being implemented to achieve the modal transition.

The Framework then seeks to set out the delivery plan requirements under a number of different scenarios and this is explained through a number of identified themes, such as 'roads, streets and neighbourhoods' and 'increasing bus use'.

The Framework then goes into detail under each of these themes, identifying who is responsible for delivery, the indicative cost range, and what is the expected modal transition that can be achieved through successful delivery of each programme or intervention that are contained within these themes.

These details have been informed from comprehensive desktop research and benchmarking, and detailed discussions and workshops with officers working across all of the HGGT partner councils.

These programmes and interventions are all then subsequently brought together in the delivery pathway, which sets both short-term (next 2 years) and long-term (up to 2040) actions that will need to be undertaken to achieve the objectives.

How to use this Framework

This Framework will have different uses for different parties all responsible for various elements of influencing movement choices across the HGGT area.

HGGT and Partner Councils

This Framework will be a critical piece of work that can be used by HGGT and councils to ensure that there is a clear pathway to the modal transition that needs to happen. This will act as their guiding framework to know what to do next, when to do it, how long it will take to deliver and to gain an indication of the likely impact and contribution towards the set objectives.

Developers

Developers bringing forward plans will need to demonstrate alignment with this Framework and propose development that is complementary, whilst also being cognisant of the phasing of the transport programmes.

Local Authority Officers and Decision Makers

Local Authorities will use this Framework to aid planning decisions, enabling them to robustly respond to planning applications and support them in discussions with developers.

Residents and Local Interest Groups

This Framework should give residents comfort that there is a clear pathway that has been established to understand what needs to happen, and when, to ensure the sustainable delivery of growth in the HGGT area.

Stakeholders and Businesses

It is crucial that wider stakeholders (e.g. public transport operators) and local businesses and public sector groups such as schools and the local NHS trust are fully bought into the Framework. It will be crucial for their support to be gained for the Framework to be deliverable and for the transition required to be achieved. They will use this Framework to inform future business planning through understanding the long-term vision for the HGGT area.

2. Context and Setting the Challenge

2.1 HGGT Vision

Harlow has grown from a vision shaped by Gibberd: '*an organism which would go on changing and being rebuilt as the needs of the people changed*.'

Sustainable development, health and wellbeing of residents, and better connecting Harlow as it grows are now among the key needs of people currently and going forward.

It is important to remember that HGGT is not starting from scratch:

- Gibberd designed Harlow for cycling and walking
- Harlow is already well-connected to urban areas and nature

Modal transition is critical to realising the Gibberd vision

2.2 HGGT Modal Transition Objectives and Funding Conditions

There are two key elements that form the requirements around the modal transition objectives. These are critical as they underpin the Transport Strategy, but also significant sums of Central Government-allocated funding that conditions the need to demonstrate progress towards the achievement of the stated objectives. This is set out in more detail below.

Modal Transition Objectives

50 % by of all trips starting and/or ending in the **existing** settlement area of Harlow Town should be by **active and sustainable travel modes.**

60% by 2033 of all trips starting and/or ending in the **new** Garden Communities of Harlow & Gilston Garden Town should be by **active and sustainable travel modes**.

Key takeaways:

- Existing residents and the travel within the HGGT area needs to achieve Modal Transition to reach the 50% sustainable mode objective.
- New strategic sites being delivered across the HGGT area will need to *establish* how the modal objective will be achieved, what they are delivering to ensure this and how they will get to 60%.

Grant Determination Agreement (GDA) Part 1 - Transport Monitoring

For the Housing Infrastructure Grant, wording has been agreed that states: that the Grant Recipient shall provide:

- Further transport **monitoring and evaluation** if requested by the Department for Transport, including, but not limited to, the monitoring and evaluation of travel plans including sustainable and active modes;
- Details of **potential approaches** to meeting this requirement

Key takeaways:

- Clear and effective Monitoring and Evaluation Plan is required showing the baseline information and the pathway to achieving the requirements.
- The Framework will need to set out the range of potential approaches to meet the requirements, for both existing HGGT area residents and those in the future.

2.3 Measuring Mode Share and Global Comparisons

Most towns and cities in the UK do not monitor their mode share. Measuring mode share is only possible through travel surveys or potentially using innovative techniques such as monitoring mobile phone data, although this comes with its own challenges.

An indication is usually inferred through Census-collected data by assessing the mode used to commute. However, the 2021 Census was undertaken during the Covid-19 pandemic when travel patterns were impacted. The Census is also only undertaken every 10 years, meaning change can be hard to monitor on a more granular basis.

The Department for Transport (DfT) does undertake an annual National Travel Survey (NTS), but this covers the whole UK and the sample size is too small for regional analysis.

Some larger cities conduct ongoing mode share analysis, for example Transport for London (TfL) produce annual Travel in London reports.

The chart on the right is a summary of the 2021 Census commuting mode share for Harlow and other towns and cities. Harlow currently has a relatively high car mode share, low amounts of working from home and moderate public transport and active mode share.

Harlow's high motorised mode share for journey to work compared to WFH and active travel could be attributed to the labour market profile of the town set out in the transport baseline. The sociodemographic mix of the area, comparative expenses of sustainable transport options compared to the car, national reduction in passenger transport use following Covid-19, lack of investment to maintain active travel routes and passenger travel options, the lack of flexibility of sustainable transport, and the reliability of services are also contributing factors.

Other examples of lower car use have been in historical settlements. Cities and towns with constrained road networks (such as Cambridge, Delft or Pontevedra) or modern suburbs designed to support low vehicles use (Vauban or Houten example overleaf) have significant road capacity constraints, which support uptake of different modes of transport. However, there are also other examples of cities delivering higher shares of sustainable travel through investment in a range of infrastructure alongside the right transport policies. The specific challenge in Harlow is that the existing transport and urban realm has historically prioritised vehicle movements between neighbourhoods which alongside trends in higher car ownership, the relative costs of different modes and location of employment has made driving the dominant transport model.

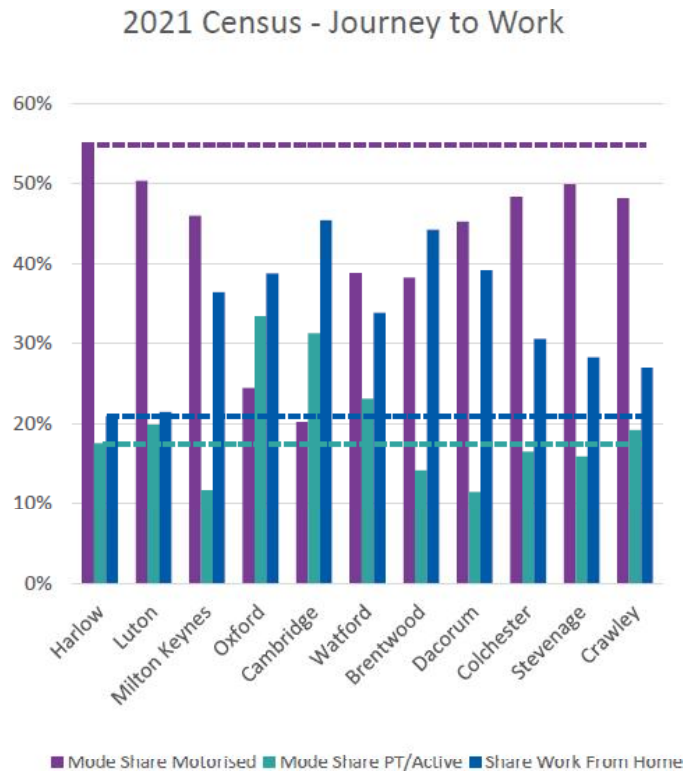


Figure 1: Comparison of commuting mode shares – Harlow and other towns and cities (2021 Census Journey to Work [JtW])

2.4 Case Study 1 – Odense, Denmark

Odense is the third largest city in Denmark, located 100 miles from Copenhagen. It has been successful in increasing the share of both active transport and public transport, whilst reducing traffic.

Local public transport is provided through a light rail or tram system (opened in 2022) and buses which are connected to neighbouring communities through active transport. The tramway was constructed on previous highway which was seen to be creating severance for active and public transport in the city. Odense also developed an integrated ticket system for use across modes, and a low emission zone operates in the centre of the city.

Odense has targeted campaigns in place to increase the level of active travel within the city. This includes bike friend campaign, a cycling coach scheme and walking challenge. These campaigns are alongside investment in cycling infrastructure. For example, the main railway station has ample cycle storage and there is over 540 km of bicycle paths.

Figure 2: Odense tramway opened in 2022

Table 1: Comparison of mode share with Odense, Denmark

	Odense	Harlow
Population	175,245	93,566
Public Transport Mode Share	26%	14%
Population Density	2,280.74/km2	3,058/km2
Motorised Share	28%	77%
Cycle Usage	50% of all central trips done by bike	2.6% of adults cycling for travel at least 3 times per week

Figure 3: Odense foot and cycle bridge

2.5 Case Study 2 – Houten, Netherlands

Houten is a suburb on the outskirts of Utrecht, Netherlands. Like Harlow, it was a "new town" however it was designed specifically to maximise cycle and public transport access over the private car.

Vehicles are only able to leave neighbourhoods via the ring road whilst the neighbourhoods are connected by dedicated walking and cycling routes. This means that active transport is faster for nearly all short journeys and external journeys can still be made by car. Key trip attractors such as schools are located on the active transport spine.

Houten actively promotes sustainable travel through behavioural change programmes. These, combined with innovative design features and the city's persistent policies to favour cyclists and pedestrians, have resulted in numerous measured benefits, including improved cyclist and pedestrian safety, increased activity levels of residents, and reduced air quality impacts.

Figure 4: Strategic transport map of Houten

Figure 5: Houten neighbourhood cycle path

Table 2: Comparison of mode share with Houten, Netherlands

	Houten	Harlow
Population	49,911	93,566
Cars per 1000 residents	415	564
Population Density	914/km2	3,058/km2
Public Transport Mode Share	11%	14%
Motorised Share	45%	77%

2.6 Example Mode Share Targets from Other Cities

London

Target: 80% of trips by Public and Active Transport by 2041

Baseline: 65% of trips by Public and Active Transport (2022)

Historical change: London Has achieve a 12% increase in sustainable mode share from 2000 to 2022.

Key components of s**trategy**:

- Continued investment in public transport including bus in outer London, local rail services and tube.
- Healthy Streets programme to encourage walking and cycling and new active travel infrastructure.
- Denser development, public transport accessible areas.
- Utilising further road pricing if required.

Greater Manchester

Target: 50% of trips by Public and Active transport by 2040

Baseline (2018): 40% of trips by Public and Active Transport

Historical change: No evidence of transformative modal shift to sustainable trips prior to creation of TfGM but

Key components of **strategy**:

- Control and reform the bus networks through franchising.
- Development of tram/train network.
- Integrated ticketing and improved rail service.
- Expansion of cycling infrastructure.
- Focus dense development on public transport corridors.

Other Areas

Target: Most regions cities target changes in specific modes or outcomes. Examples include:

- **DFT**: Net zero transport in U.K by 2050. DFT Decarbonising Transport
- **Wales**: 45% of journeys to be made by public transport, walking and cycling – by 2040.
- **Active Travel England**: 50% of trips in England's towns and cities are walked, wheeled or cycled by 2030
- **Oxford**: 50% increase in all cycle journeys within Oxford for all purposes by 2031.
- **Cardiff**: Increasing mode share of sustainable modes from 51% to 75% by 2030.
- **Edinburgh**: 30% reduction in kilometres (KMs) travelled by car by Edinburgh residents.

2.7 Optimal Path to Achieving the Modal Transition Objectives

The optimum path to achieving the modal transition objectives will need to adapt to economic and societal changes and the success of committed infrastructure schemes.

Public acceptability and cost are key constraints, but the most impactful modal shift policies have included potentially controversial measures such as restricting certain traffic movements and some form of pricing mechanisms for travel.

To get public support better public and active transport needs to be delivered so residents have more viable choices other than private car. If publicly acceptable measures do not achieve the required behaviour change, then higher impact measures may be needed which may include greater use of vehicle restraint or pricing.

Most successful modal transition frameworks rely on a mix of better services, promotions, effective pricing and restraint measures.

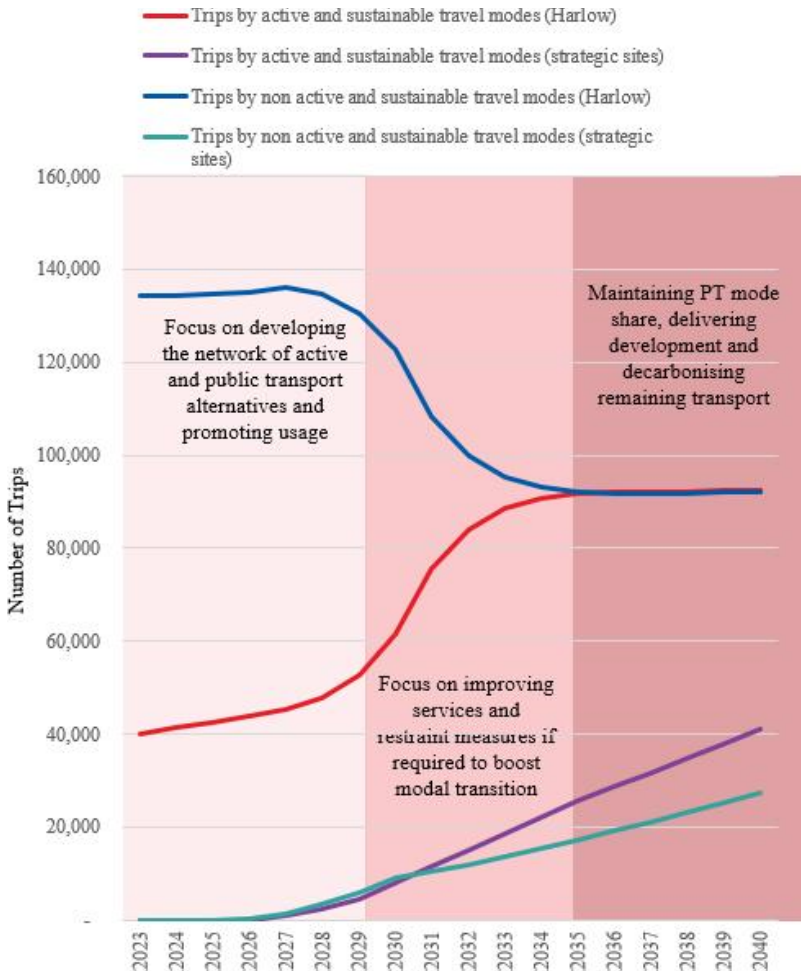


Figure 6: Recommended path to achieving the modal transition objectives for HGGT

2.8 Factors that Influence Future Modal Shares

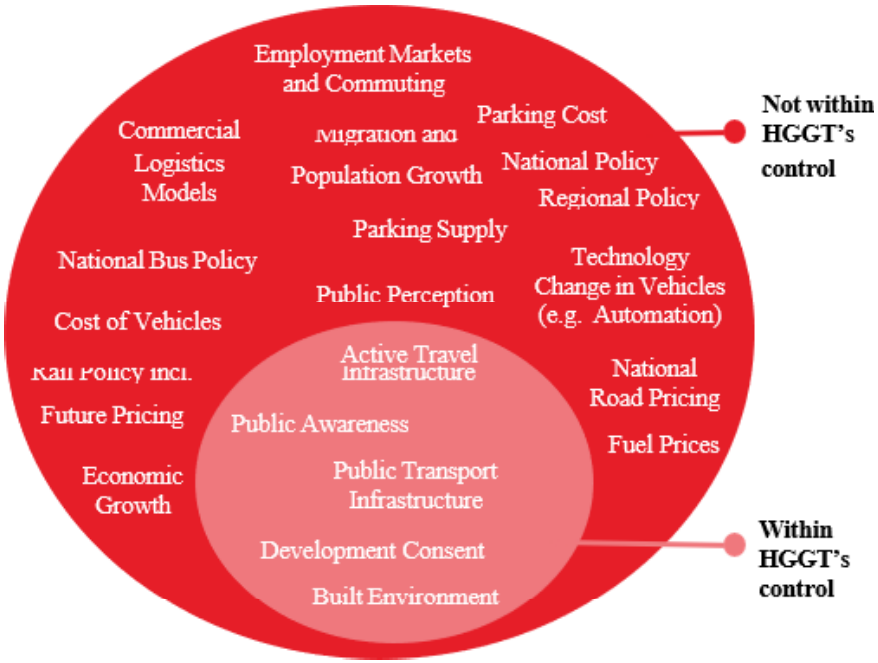


Figure 7: Factors not within and within HGGT's control

There are many factors that influence travel, and hence mode share, that are not within the direct control of HGGT partners. The factors outside HGGT's control will influence what needs to be delivered to meet the modal transition objectives. These will change over time and will also impact the success of each individual intervention. Future "background" changes are uncertain and will require flexibility in strategies and plans to be able to respond.

Key examples of factors outside HGGT's control that impact any planned strategy are:

- **Travel demand changes** induced by Covid-19.
- **Fuel price** spikes changing behaviours.
- The role of **smartphones** in transport which are changing the way people plan journeys and the preferences of travellers.
- **Online retailing** changing leisure habits and society is adapting to people spending more time online rather than in person, reducing some leisure trips.
- **Population dispersal** due to technology.
- **Working from home** creating 'occasional' commuters who are harder to predict.
- Land use changes through permitted development rights (PDR) resulting in uncontrolled **distribution of key journey attractors/generators.**

3. Baseline Transport Profile

3.1 The Challenge – Mode Share

The area of significant challenge for the delivery of this Framework is the scale of the modal transition required. The current mode share for sustainable transport, whilst reasonable for the context of the HGGT area, is still far below the future modal objectives. The challenge of implementing this change and what that means for overall numbers of people travelling by sustainable modes is an important consideration when developing the prioritised interventions. The challenge is illustrated in the figure below.

In line with the HGGT Transport Strategy:

- Active and sustainable transport = walk, cycle, bus, train
- Non-sustainable transport = vehicle passenger or driver

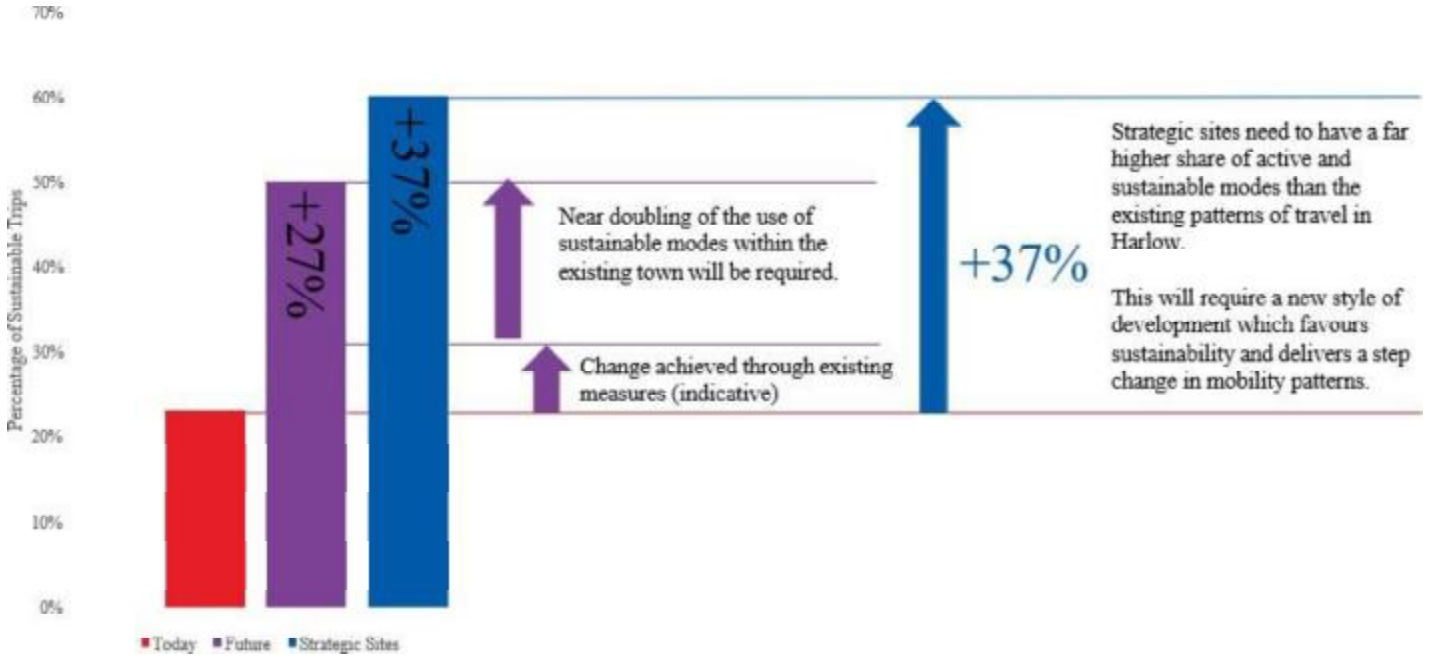


Figure 8: The challenge - modal share

3.2 The Challenge – Demand

The modal transition objectives, coupled with the expected population increases correlate to a significant increase in the number of trips to be made by sustainable modes:

- + 90,267 (+216%) trips per day if there is no reduction in the trip rate (trips per person per day).
- + 48,157 (+115%) trips per day if there is a reduction in the trip rate (trips per person per day).

The capacity of the active and public transport network will need to match this anticipated demand.

The reduction in the non-sustainable mode share results in non-sustainable trip reducing moderately from 2021 with the growth projections.

It should be noted that previous studies on the number of trips, used in support of the Local Plan, presented forecast trip rates which only considered vehicle trips in the peak periods for a wider area.

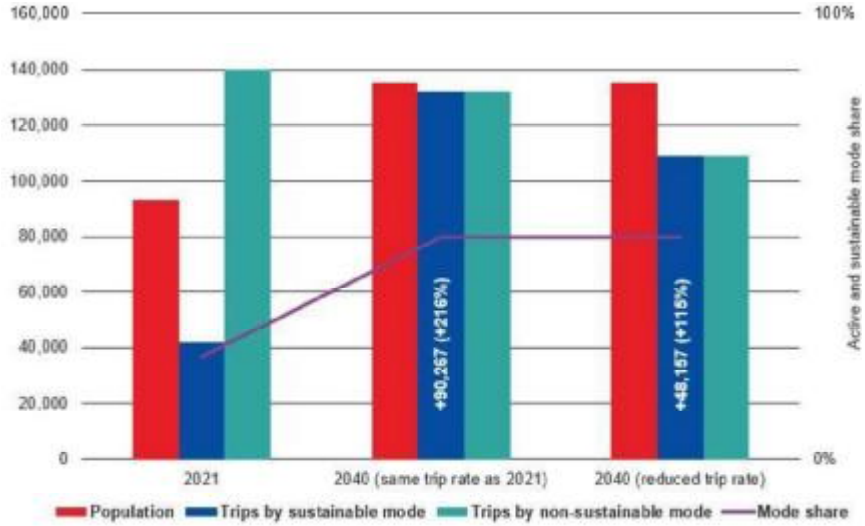


Figure 9: The challenge – total demand forecasts

Note:

2021 trip rate: 1.95 trips per person

Reduced trip rate: 1.61 trips per person (1% reduction per year)

Trip rates in the U.K have been falling due to changing leisure, retail and employment patterns, if these where to continue demand for travel on a per capita basis would fall.

3.3 Baseline Mode Share Results (Stantec)

To help inform the progress of the transport strategy and understand the baseline mode share in order to measure against targets, HGGT commissioned Stantec to undertake comprehensive travel surveys across the area of interest, in November 2022 and March/April 2023. Three types of surveys were undertaken.

Residential Surveys:

- 20,000 letters sent out
- 3% response rate

Employee Surveys:

- 1,900 business contacted
- 728 online-only responses, reduced to 135 valid responses with trip data

Retail/Leisure Surveys:

- Of 2,312 surveyed, 759 (33%) valid responses utilised

Key Issues / Limitations:

- Survey response was less than hoped but still provides reasonable statistical reliability.
- A clear methodology has been taken to ensure that sustainable modes are not overreported due to analysis of both trip stages and in totality.

The baseline mode share from the residential survey has been validated against Census 2021 (which asks specifically about travel to work), with the results not having significant variances, which confirms its robustness, considering the Census 2021 was undertaken during Covid, which resulted in some anomalies (e.g. less public transport use and more driving).

NTEM Data:

- National Trip End Model forecasts growth in trip production and attractions for use in transport modelling. 2023 NTEM data was extracted by Stantec for Harlow District using TEMPro software. Like any forecast model it partially only models the spatial reality in local areas.

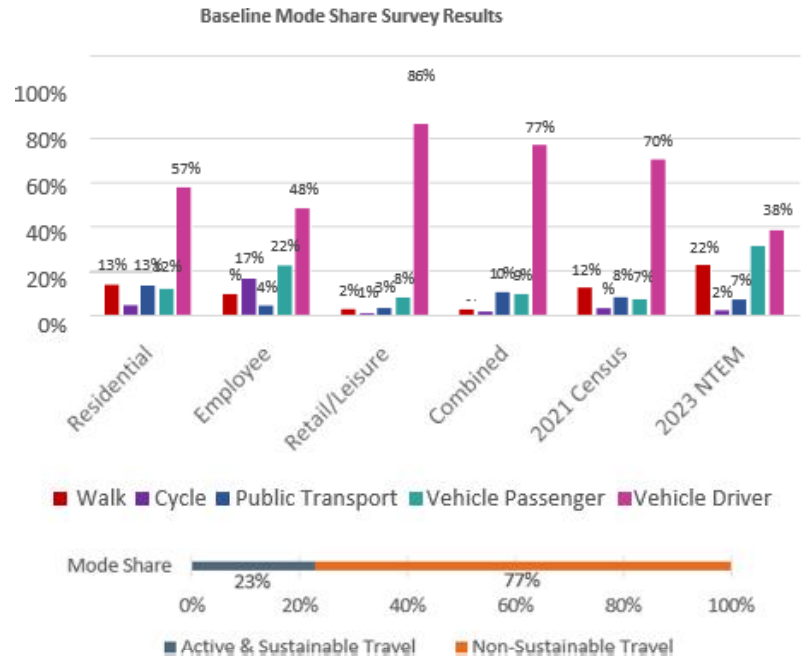


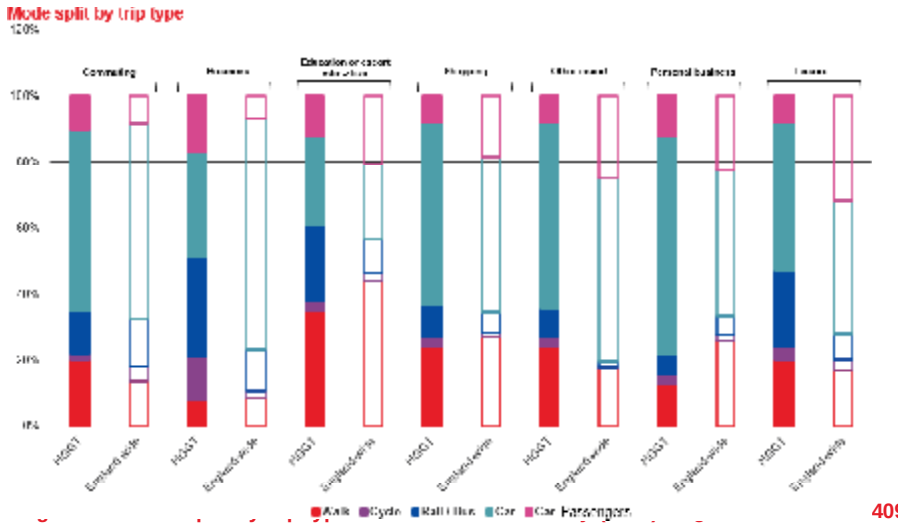
Figure 10: Baseline modal share survey results (Stantec, 2023)

3.4 Mode Share: All Trip Types

HGGT residents currently:

- **Rely on car** for commuting, shopping, escorting family members, personal business and leisure.
- **Show propensity for higher uptake** of **walking** for commuting, escort and leisure compared to the England-wide average.
- **Show propensity for higher uptake** of **cycling** for business and shopping compared to the England-wide average.
- **Show propensity for higher uptake** of **public transport** for business, education/education escort, shopping and leisure compared to the England-wide average.

Combined (residential, employment, retail/leisure) surveys resulted in a baseline (2023) mode share of **23% of people using sustainable modes.**



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Note:

The baseline mode share taken from the Stantec surveys was based on low response rate, and should therefore be treated with some caution (albeit evidence is provided to indicate it aligns with comparative data e.g. census).

3.5 Mode Share: Commuting

Commuting trips have been investigated for patterns and the following insights have been developed.

Compared to the 'all trips' mode share:

- **HGGT residents' commuting trips** tend to be done more by sustainable modes than other trips.
- **HGGT employees' commuting trips** tend to be done less by sustainable modes than other trips.

2021 compared to 2023:

- **Slight reduction in public transport use** (continued recovering from Covid-19).
- **Increase** in **walking** and **cycling**.

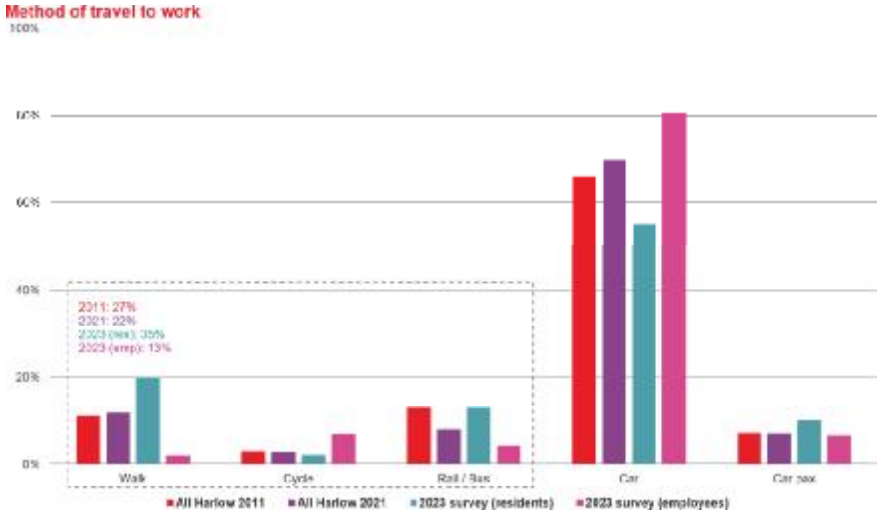


Figure 12: Method of travel to work - Census (2011 and 2021); Stantec surveys (2023)

Note:

The baseline mode share taken from the Stantec surveys was based on a low response rate and should therefore be treated with some caution (albeit evidence is provided to indicate it aligns with comparative data e.g. Census).

3.6 Trip Duration: All Trip Types

According to survey data of the HGGT area taken from the Stantec travel surveys (2023):

- The majority of trips surveyed have a duration of 11-30 mins.
- 54% of trips are internal to Harlow; 46% external.
- Opportunity to target 0-30 mins trips being undertaken by car with active and bus transport.
- Longer distance trips are more challenging to convert to sustainable transport modes.

In comparison the England-wide averages[1] are:

- **Walk**: 18 mins
- **Cycle**: 24 mins
- **Rail**: 82 mins
- **Bus (non-Lon)**: 37 mins
- **Car**: 21 mins
- **Car pax**: 22 mins

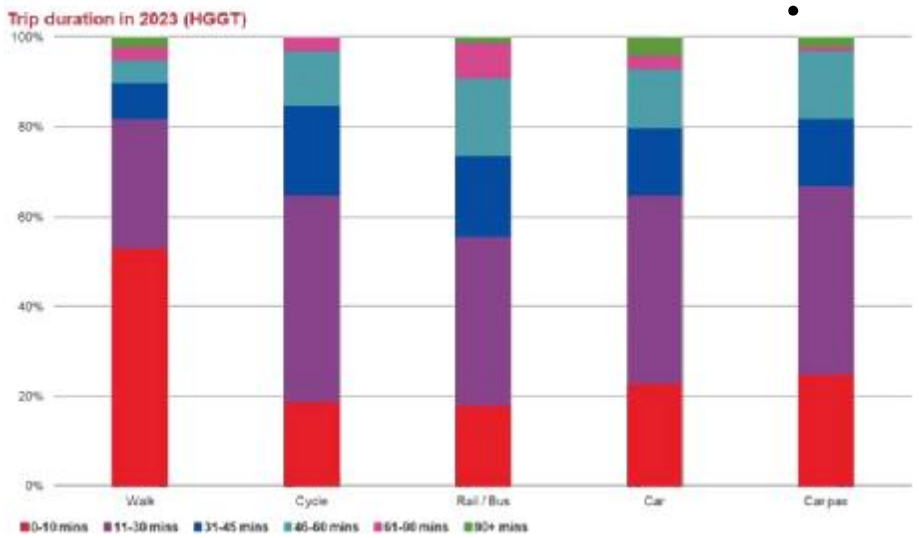


Figure 13: Trip duration, Stantec residential surveys (2023)

Duration of internal employment trips	49%	40%	7%	0%	0%
Duration of internal residential trips	48%	43%	5%	2%	1%

Note:

The baseline mode share taken from the Stantec surveys was based on a low response rate, and should therefore be treated with some caution (albeit evidence is provided to indicate it aligns with comparative data e.g. census).

[1] NTS, 2022 – NTS0303

3.7 Transport Network – Relative Cost of Car and Bus

The Bus Network Review for Harlow has been interrogated to understand how the attractiveness of bus compares to the attractiveness of driving.

The average bus fare for adult commuters is £0.25 more expensive than the average long-stay parking charge[2]. The average bus fare for a leisure trip is £2.59 more expensive than the average short-stay parking charge.

Around 1/3 bus passengers are part of concessionary schemes and do not pay a full fare.

For larger family groups travelling by bus can be significantly more expensive than parking – where costs such as are shared.

Currently bus fares are £2 as part of a national bus fare cap, this will temporarily reduce the cost of travelling by bus for many trips.

This difference may therefore act to encourage more people to use private car over bus when making commuter and leisure trips.

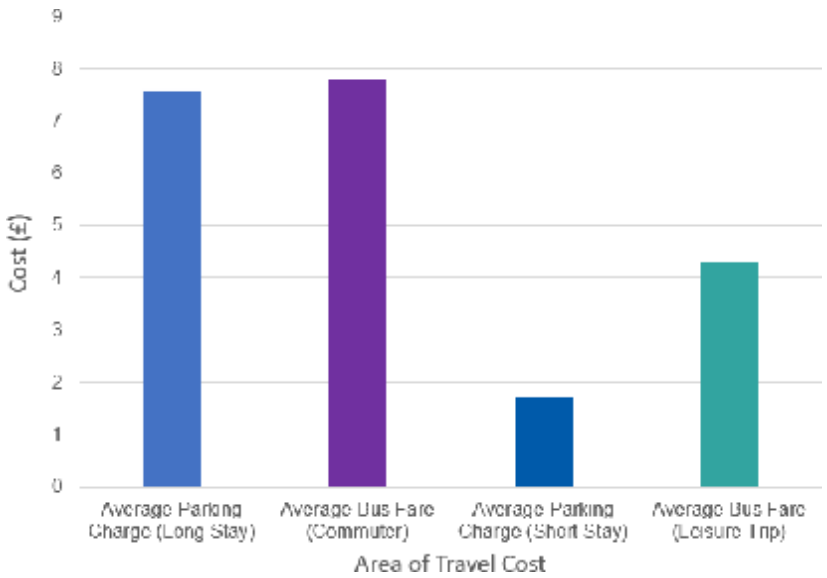


Figure 14: Car parking costs against public transport ticket pricing

[2] It is noted that the bus fares relate to an adult fare per person whereas car parking charges are per vehicle.

3.8 Private Sector Car Parking

Parking in central retail and employment areas of Harlow is relatively low cost and provided by private businesses for customers or for employees.

Key car parking observations:

- Many hospitably and leisure business are likely to continue to want to provide free parking to attract customers in a competitive market.
- For many retail business, providing free car parking ensures competitiveness with out-of- town retail or online retailers and cost of provision is relatively low.
- Providing employees with parking ensures they competitive with other employers and providing the equivalent public transport discount as a benefit has additional tax implications.
- With many employers providing free parking and many employees having free parking at home (either off-street or on-road) increasing the share of employers commuting by public transport over medium and long distances can be challenging.

Car Park	Number of Spaces	Charges (Weekday - approx. 2 hours)
The Water Gardens	1200	£0.90 for 2 hours
Queensgate Centre	842	Free (customers only)
The Harvey Centre	731	£1.10 for 2 hours
Terminus Street	678	£3 for 2 hours
Harlow Town Station	673	£2 for 2 hours
The Oaks Retail Park	382	Free (customers only)
Post Office Road	139	£1.25 for 2 hours

Table 3: Main car park capacity and charges in Harlow

3.9 Employment Profile

Harlow's economy has a high quotient of public sector employment including:

- Harlow College (400)
- Harlow Council (400)
- The Princess Alexandra Hospital (3,500)

In the private sector the employment market has a higher-than-average employment in sectors like Retail (22%) and in the public-private sector with Health and Social work (19%). Much of Harlow's private sector employment is in businesses of under 100 people and their sustainability is vital to ensuring the local economy is growing.

The shift patterns in many of many occupations requires early morning and late evening commutes, this may favour car journeys and alternatives need to provide a competitive service outside core hours or equivalent levels of safety and security in early morning and evening such as lighting and maintenance of paths.

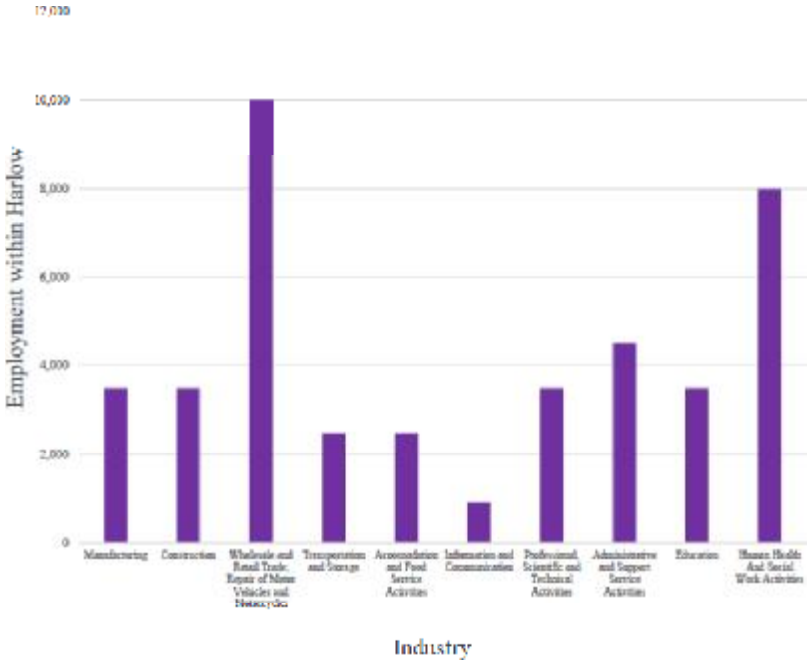


Figure 15: Jobs located within Harlow by sector (Source: Nomis data, 2022)

3.10 Travel Behaviour

Various sources of information have been interrogated to infer travel behaviours, the key points to note are that:

- In Harlow, there is broadly balanced commuting flows (slightly tilted toward outflow of commuters – 16,000 inflow compared to 16,500 outflow). There is generally an inflow nationally for towns and cities, due to their role as employment hubs.
- Internal travel is by 34% sustainable modes (with walking accounting for 21%) and indicates already significant car sharing (9% internal passenger trips compared to in/out travel).
- Only 11% sustainable travel into Harlow.
- Travel from Harlow appears more sustainable at 22% - reflecting significant travel to work in London.

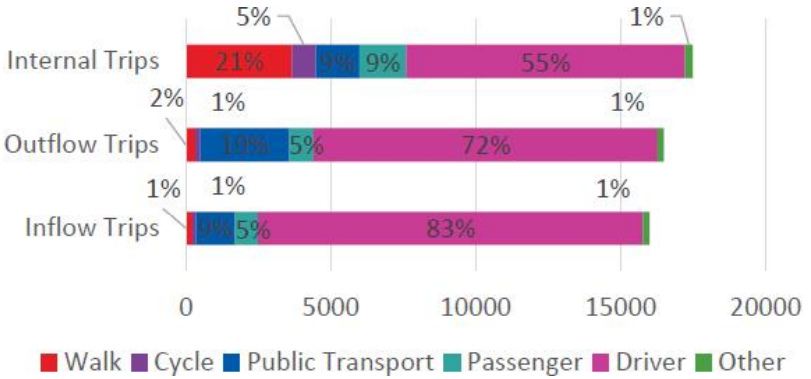


Figure 16: Internal and external trips (Harlow Economic Development Strategy, 2023)

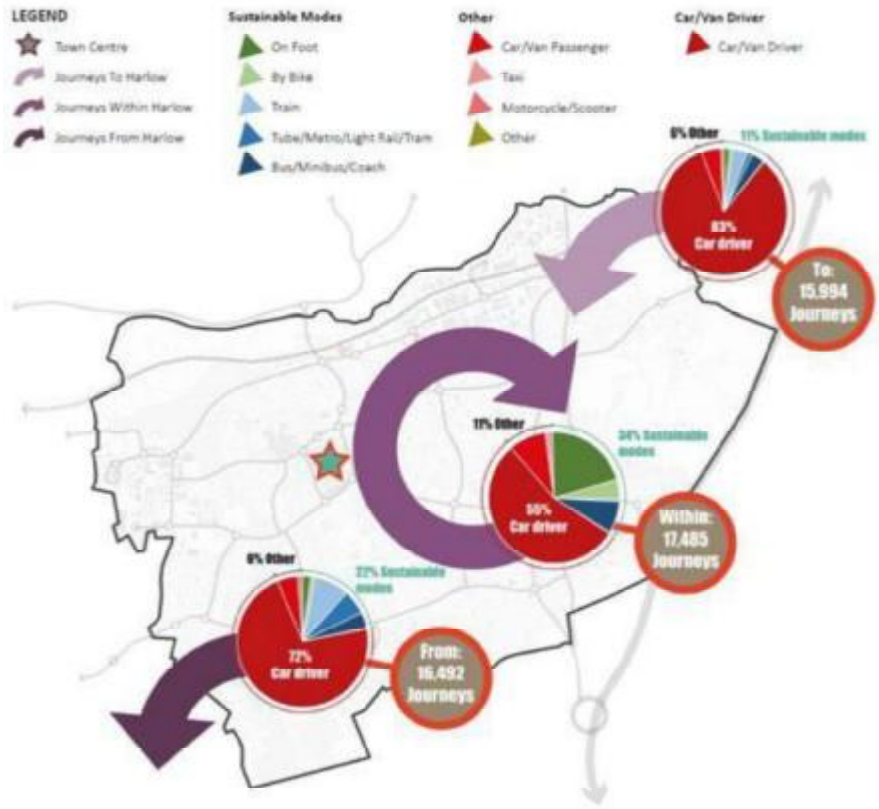


Figure 17: Internal and external trips by mode

4. Challenges and Opportunities

4.1 Challenges

This section sets out to summarise the challenges identified through the baseline diagnostic review that have been distilled down and grouped into various themes.

All identified challenges have been assessed against the impact to modal transition objectives and were then considered to be taken forward during the prioritisation and scenario testing phase of the study.

Challenges have been summarised into the following categories:

- Travel patterns
- Transport network
- Spatial design and land use
- Social characteristics
- Resources
- Political
- Economy

Category	Challenge	Supporting data	Implication on modal transition objectives	Level of HGGT Partner control
Travel patterns	Low number of people in jobs that enable working from home.	Occupation current - Census Maps, ONS	Limited ability to reduce the total number of commuting trips. Car is the main mode used by existing residents for commuting.	**Low –** HGGT can improve the attractiveness of working from home by supporting improvements to high-speed internet; HGGT can influence master planning of strategic sites to reduce the number of trips people are required to take to access various services. The type of employment in Harlow is high in sectors which require on site working reducing the overall potential for home working – over time this may change as economy changes and through the development of HGGT,
	Many trips start and/or end outside of the HGGT area (some including the rural hinterlands of Essex and Hertfordshire and beyond).	Stantec survey 2023 (internal / external trip analysis)	These longer trips are difficult to serve in their entirety by alternatives to the car. Modal Transition for these will rely on the bus network (noting there is a role for rail connecting some adjacent areas).	**Low –** Improving regional bus services requires financial subsidy and to achieve comparable journey times with car is likely to require a high level of funding. Rail WAML service pattern dominated by the Stansted Express services and the key employment locations are a lengthy walk from the station requiring first/last mile solutions.
	Limited data availability of trip patterns (i.e., challenging to understand trip patterns based on current data - Stantec survey, Census or NTS).	Officer interviews	Limited understanding of trip patterns and profiles makes informed investment in interventions for Modal Transition more difficult.	**High –** HGGT can improve understanding and monitoring of trips to and within the HGGT area.
Transport network	Even with Modal Transition objectives, there is a need to retain highway capacity due to projected population grows	Stantec survey 2023; population projections (see slide 11)	Any reductions in highway capacity at locations will need to be carefully considered.	**Medium –** HGGT can provide an important coordination and collaboration role with the partner councils making up the LHA and would be consulted with for future governance, with final responsibilities lying with the highways authorities as LHA (HCC/ECC).
	Falling bus patronage and the challenging of developing sustainable mode share without ongoing subsidy	bus01.ods (live.com) (BUS01e)	Reduction in bus mode share. Higher costs for multiple people/families using buses compared to parking even with current fare cap.	**Medium –** Improving bus services requires financial subsidy, likely to require a high level of funding. However, bus subsidies may be required as part of S106 agreements. Subsidy required alongside analysing whole journey package to understand constraints of current provision and measures to reduce attractiveness of parking cost in line with ECC standards.
	Missing links within the walking and cycling network.	HGGT Transport Strategy	Limits the case for change to walking and cycling modes if the network is disconnected between key O-Ds.	**Medium –** HGGT have produced an LCWIP and will be updated early next year. This will interlink with LCWIP's produced by the counties. HGGT needs to continue to make the case for funding through national schemes. Currently only LHA's can bid, with no indication within that this will change in future.

Transport network	Distance to the train stations from communities in the south.	HGGT Transport Strategy	Potential reduction in the attractiveness of using the train for longer trips or use of sustainable modes to get to the station.	**Medium –** HGGT has developed proposals to increase public and active transport from the south but there are areas outside of control of HGGT such as fare integration.
	Real and perceived safety issues with sustainable transport network.	HGGT Transport Strategy	Potential reduction in attractiveness of active and sustainable modes.	**High –** HGGT can run trials on new modes and support safety through messaging and programmes. HGGT can liaise with LHA to ensure infrastructure is maintained and delivered to a high standard and raise issues to address with them.
	Limited collaboration on demand-responsive transport (DRT) / community transport.	Officer interviews	Limits the potential for cross-boundary DRT or community transport to fill gaps in the transport network.	**Medium –** HGGT can push the agenda for this amongst partner councils, but achieving buy-in from all is not guaranteed.
	Accessibility (travel time) by car compared to other modes	Accessibility mapping	Limits attractiveness of non-car modes if they can't access a similar number of destinations in an equivalent timeframe.	**Medium –** Improvements to the active and public transport networks will increase the accessibility of these modes. Proximity to strategic road network presents challenges to level of control.
	Relative cost	Officer Interviews	The relative costs of modes can result in incentives for car trips especially for larger groups	**Low –** National and regional systems are controlled by different organisations
	Long term sustainability of high frequency bus services, share and demand responsive transport service	Officer Interviews	Introducing comprehensive new form of transport need to have long term revenue and sustainability plans.	**Low** - Existing public transport is delivered through either privatised bus network and future services such as shared mobility are also operated commercially and therefore will seek to maximise profits over-achieving wider aims such as increased mode share.
Spatial design and land use	Readily available cheap parking in town centre, main employment areas and residential developments.	Spatial mapping	Does not disincentivise driving throughout HGGT.	**Medium –** Council-owned parking is within HGGT's control, but retail and employment sites are privately owned, and companies have commercial pressure to retain.
	Spatial layout of HGGT.	Spatial mapping	Planned poly-centric layout will provide residents with access to a large number of services in a short distance. These trips are more easily accommodated by active and sustainable modes.	**Low –** Existing settlement patterns are established and no significant change to these is anticipated (e.g. land use). However, the strategic sites can be planned to aid the achievement of the Modal Transition objectives.

	Private Sector Parking Supply	Spatial mapping	Current model does not disincentivise driving, and there are potential political and costing issues in driving a shift away from this model.	**Low**- Private parking owned by many businesses is seen as key to attracting customers and retaining competitiveness as an employer, with employee expectations to have free on-site parking.
	River Stort severs HGGT (as well as A414).	Spatial mapping	Disproportionally increases the journey time of walking and cycling compared to driving.	**High –** A second Stort crossing is being planned according to the strategic transport network vision. Further possible intervention includes Parndon LCWIP Mill Route, Link to Roydon Station and improvements to the paths in the Stort Valley.
Social characteristics	Lifestyle factors, e.g., leisure activities, times and location of employment, family commitments, etc.	General (i.e., not specific to HGGT)	Potential reduction in attractiveness of active and sustainable modes for certain trip types or traveller characteristics.	**Low –** HGGT is very limited in terms of what it can do to influence these lifestyle factors.
	High car use.	HGGT Transport Strategy; Stantec survey 2023	Potential reduction in attractiveness of sustainable modes (walking and cycling: safety; buses: congestion) if cars dominate the local streetscapes.	**Medium –** HGGT can't control national policies on relative cost of modes e.g., public transport fares, fuel duty, etc.
	Resistance to change.	General (i.e., not specific to HGGT)	A long-term and persistent commitment over many years is required which may involve impacts on existing patterns of use.	**Medium –** HGGT will need local buy-in to deliver the measures that will impact existing residents.
Resources	Capacity in partner councils.	General (i.e., not specific to HGGT)	Limited human resources available to push the agenda for modal shift.	**Medium –** Knowledge transfer throughout the partner councils and the Modal Shift Officer role will help to raise the profile of the task.
	Funding availability.	General (i.e., not specific to HGGT)	Limited human resources available to push the agenda for modal shift.	**Medium–** Local Authorities can take funding decisions or re-prioritise funding. Funding availability is also available from central government grants, etc.
Political	Gaining long-term political support.	General (i.e., not specific to HGGT)	Appendix ALong-term planning to support the Modal Transition is challenging. The introduction of the Joint Committee will enable HGGT greater decision-making powers, and delegation in some respects.	**Medium –** HGGT can lobby politically.
	The 'Plan for Drivers' (DfT, Oct 2023).	General (i.e., not specific to HGGT)	Introduction of measures to balance the time differential and environment between sustainable modes and vehicles is difficult to introduce.	**Low –** National approach to drivers from the Government.

	Gaining local support.	Officer interviews	Hesitance to make difficult decisions to support the Modal Transition if local support is not there.	**Medium –** HGGT will need local buy-in to deliver the measures that will impact existing residents.
Economy	Vehicle ownership.	Number of cars or vans - Census Maps, ONS	Can be difficult to influence people's behaviours away from car use towards sustainable modes with very high levels of car ownership. Locations with high public and active transport mode share tend to have far lower car ownership then Harlow (although Harlow (78% car ownership is amongst the lowest in Essex (83%).	**Medium –** HGGT has limited over whether residents own vehicles, but it can influence design of new developments to reduce the need of existing communities reliance on private vehicle ownership through improving the quality of alternatives to car ownership or polices that reduce car ownership such as household parking permitting.
	Increasing costs of bus operations.	General (i.e., not specific to HGGT)	Reduction in bus mode share because of bus operators withdrawing bus services, reducing the network coverage and service frequency.	**Low –** Much operating cost is driven by external factors outside of HGGT's control, including energy and fuel prices, inflation, availability of staff, etc. Bus priority can play a role in increasing the speed of buses and HGGT has the ability to secure funding to make improvements in this field but will require much wider, key issues addressing, which HGGT has no control over.
	Propensity to change different social groups including deprivation	IMD	It may be harder to increase uptake people in lower incomes as they could have other more pressing economic challenges than travel even though sustainable transport is in many cases more affordable. However public transport use is often higher for lower income groups, often due to lower car availability.	**Medium** - The HGGT Quality of Life work has identified issues and begun to build relationship with local communities and should be developed further.

4.2 Opportunities

This section sets out to summarise the opportunities that have been identified through the baseline diagnostic review. It summarises these into the following categories:

- Published LCWIP
- Area Wide Network Management and Liveable Neighbourhoods
- Infrastructure
- Harlow Town Station
- Spatial Design and Land use
- Travel Patterns
- Transport Network
- Resources

Category	Opportunity	Supporting information	Implication on modal transition objectives	Level of HGGT Partner control
Travel Patterns	High number of internal (short) trips.	Stantec survey 2023 (internal / external trip analysis)	High number of potential trips to target with active and sustainable modes.	**High –** Shifting short trips to active travel could be significant contributions to the target through mix of improved cycle routes and right policies.
Transport Network	There is already an extensive walking and cycle network.	Spatial mapping	Potential faster uptake of active or sustainable modes with more investment as a baseline has already been established.	**High –** Network can improve through targeted measures and extensions to new development can be cost effective.
	Current and ongoing bus reform funding.	National Bus Strategy	Increase in bus mode share will be challenging without significant increase in funding.	**Medium –** Bus funding largely available from national funding pot and limited resources to achieve significant frequency improvements locally. Section 106 can also support service improvements.
	Maintenance and lighting initiatives to make existing network more inviting.	2022 Quality of Life survey	Potential increase in attractiveness of active and sustainable modes.	**High –** Network can improve through targeted measures and extensions to new development can be cost effective. Ongoing cost will remain a challenge.
	s106 agreements associated with new development sites and des	General (i.e., not specific to HGGT)	Will assist with funding constraints and reduce the risk of developments being constructed with no car alternatives.	**High –** Opportunity for new sites to support development of public and active transport infrastructure on the outset.
	DRT / community transport to help to service rural areas or fill gaps in other parts of the network.	General (i.e., not specific to HGGT)	Potential increase in bus mode share.	**Medium –** Evidence for DRT providing significant model shift.
Resources	HGGT Modal Transition Officer role.	Officer interviews	Dedicated human resources to push the agenda for Modal Transition across the HGGT partner councils.	**Medium –** Focused resource to drive mode shift agenda.
Published LCWIP	ATF funding secured for LCWIP Route 9 and design for LCWIP4.	HGGT LCWIP	Can begin next stages of development of the walking and cycling schemes.	**High –** Funding secured (to Essex CC) and plans developed.
	N2C STC will deliver the LCWIP Route 2 by 2026 – funded through HIG.	HGGT LCWIP	Developer s106 contributions for the STC network will support LCWIP delivery.	**High –** Utilised opportunity for developers to support sustainable infrastructure development.
	CSC will deliver the LCWIP Route 3 to Gilston and upgrade the LCWIP Route.	HGGT LCWIP	Delivery of key crossing for sustainable accessibility to new developments.	**High –** Delivery of 2 infrastructure projects and improvements through 1 scheme.

	Parndon Mill Route secured in s106.	s106 Heads of Terms	Support sustainable travel for new developments.	**Medium –** Securing funding through s106 agreements. Delivery trigger must be met before funding secured. Still issues to address.
	Creation of a pipeline of schemes for further walking and cycling measures.	HGGT Transport Strategy	Key strategic aspect of maintaining infrastructure delivery to support sustainable travel by existing and new developments.	**Medium –** Capacity to develop more schemes and interlink delivery difficult.
	ECC Asset Enhancement programme has improved walking and cycling routes away from LCWIP.	Everyone's Essex Annual Plan	Key for development of a regional, sustainable travel network.	**Medium –** ECC deliverables but HGGT can manage the opportunities for connections within the HGGT area to these routes.
	ECC is planning a West Essex LCWIP to review inter-town, cross border and longer leisure and commuting opportunities.	ECC engagement	Key trip types to be targeted for transition to active and sustainable modes.	**Medium –** ECC deliverables but HGGT can manage the opportunities for connections within the HGGT area to these routes.
Area Wide Network Management and Liveable Neighbourhoods	Creation of a better balance between vehicles and sustainable travel.	HGGT Transport Strategy	Key for achieving level of desired modal transition, and greater equality between different mode choices and maximise the benefits of the active and sustainable travel programmes.	**Medium –** Aspects of strategy there but difficult to manage travel behaviour in area due to constraints such as parking ownership, business incentives and national government policy.
Infrastructure	Sustainable Transport Corridor (STC)	Harlow Council Infrastructure Delivery Plan (IDP), Gilston Villages s106 Heads of Term, Infrastructure Delivery Plan (IDP) Update 2024	Delivery of key infrastructure to support sustainable travel across HGGT area.	**High –** First leg to be delivered by March 2026 through HIG. Opportunity to invest in design of other STC sections, create outline business cases. Significant s106 funding already secured from Gilston. Network within the IDP requires developer funding.
	HGGT Area Wider Infrastructure Schemes	Harlow Council Infrastructure Delivery Plan Harlow & Gilston (HGGT) Infrastructure Delivery Plan (IDP) Update 2024	A mix of measures at key junctions across the network to improve the sustainable and active travel facilities, manage the network and reduce impact of development in residential areas. Key for delivering level of infrastructure required to achieve targets.	**Medium –** Schemes designed to preferred option stage and creation of outline business cases, with funding required.
Harlow Town and Mill Stations	ECC have undertaken an initial assessment considering options for improving bus and cycle access and related facilities on the southern side of Harlow Town Station.		Improving accessibility to the stations which will contribute to rail attractiveness.	**Medium –** Requires Network Rail approval and work undertaken by them and is based on their costings.

	Potential for wider development in the area, including existing land uses.	Infrastructure Delivery Plan (IDP) Update 2024	Promotion of sustainable travel from outset for new developments due to location.	**High –** Harlow Town Station lies within Burnt Mill designated employment area in the HDLP 2020. This allows for employment-led development opportunities with the potential to provide development contributions that can enhance transport infrastructure around the station as a transport hub and create a more attractive gateway into Harlow.
	Gilston s106 to include contribution for the Northern Access, with money set aside for feasibility study.		Key for improving accessibility to the station for Gilston Villages for sustainable modes.	**Medium –** Requires Network Rail approval and undertaken by them and is based on their costings.
	Opportunity to create mobility hub alongside modernisation of access and interchange arrangements and improve northern access to Harlow Town Station through liaison with Network Rail/GBRTT.		Creates opportunity for transport links for before/after journey stage improving attractiveness of rail and station accessibility as is relatively isolated spatially.	**Medium –** Requires Network Rail approval and work undertaken by them and is based on their costings.
	Development opportunities around stations, which would promote active travel and link into STC corridor. Opportunity for both stations to act as interchanges or Transport Hubs.		Maximising the benefits and opportunities of modal transition.	**High –** HGGT can promote improved station accessibility and facilities as driver for modal transition as referenced om the Revised HGGT IDP.
Spatial Design and Land Use	Increased proximity to services as a result of effective masterplanning.	HGGT Vision, Local Plan policies and masterplanning for strategic sites.	Potential decrease in longer duration trips and increase in shorter duration trips (that could be done by walking or cycling).	**Medium –** Potential for land use changes highest in new development.
	Increased permeability of areas.	HGGT Vision, Local Plan policies and masterplanning for strategic sites.	Potential to better connect the active transport network.	**Medium –** There are powers among HGGT authorities to change permeability through modal filters on the highway network, or to require new connections within planning policy and demand management, or to seek funds to deliver such interventions more directly.
	Job creation from development of employment land use.	HGGT Vision, Local Plan economic policies, HGGT Strategic Economic Framework 2024, HDC Economic Development Strategy 2023-2028.	Key for achieving HGGT quality of life objectives. Will enable integration with sustainable modes.	**Medium –** Difficult to control employment opportunities and business investment but land availability in public and active transport accessible areas would support high sustainable transport use.
	Mixture of land use in development to reduce trip lengths.	HGGT Vision, Local Plan policies and masterplanning for strategic sites.	Increases prevalence of active and sustainable modes due to local nature of trips.	**Medium –** HGGT LPA partners can promote mix of land uses through planning policy allocations and development management.

5. Benefits Map

5.1 Benefits Map Methodology

Benefits realisation is the practice of ensuring that benefits are derived from outputs and outcomes. Any programme of change requires a constant focus on the intended benefits (measurable improvements) if it is to deliver value and remain aligned with overarching goals. Delivering value begins with defining the expected high-level outcomes before a programme is approved and continues through the identification, profiling, tracking, and embedding of benefits.

A 3-step methodology was followed to develop a benefits map. The approach aims to promote efficient resource allocation, as it helps identify synergies and trade-offs between benefits and interventions, allowing for more informed decision-making and a more comprehensive understanding of the potential outcomes.

1. Identifying Benefits

- To assess potential measures and metrics to assess the proposed interventions, the garden city principles were used as a starting point for identifying benefits for the people of the HGGT area.

2. Logic Map

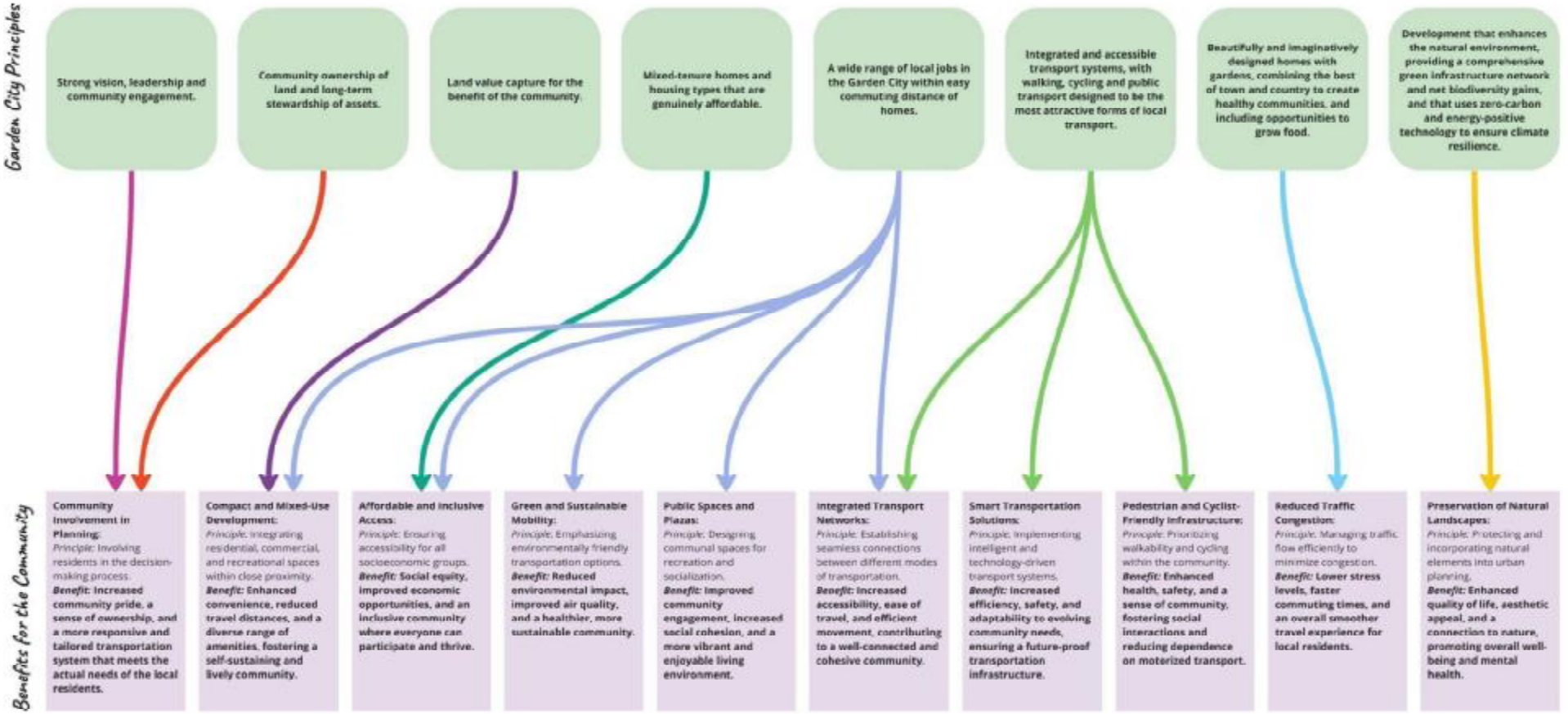
- To provide transparency of decision-making as the Framework is progressed and to help plan and provide details around activities for implementation and expected results, a logic map was developed to embed the benefits into the outputs, outcomes and objectives The aim of the logic map is to show a clear rationale between the strategy outputs, desired outcomes and benefits – all linking back to the strategy objectives.

3. Mapping Benefits

- To enable a holistic perspective, the benefits were mapped against the Framework's objectives, outcomes and outputs. By doing this, we ensure that we don't view benefits in isolation but rather understand how interventions can generate multiple benefits simultaneously and how benefits may span across different outputs and outcomes.

5.2 Garden City Principles and Benefits

The garden city principles offer a holistic framework to enhance the natural environment while also providing affordable and accessible places to live to support healthy and sociable communities. These ambitious and creative principles are the starting point for which to assess community benefits for the Framework. A transport lens has been applied to each of the principles, to understand how we might achieve the garden city principles through improved transport and modal shift.



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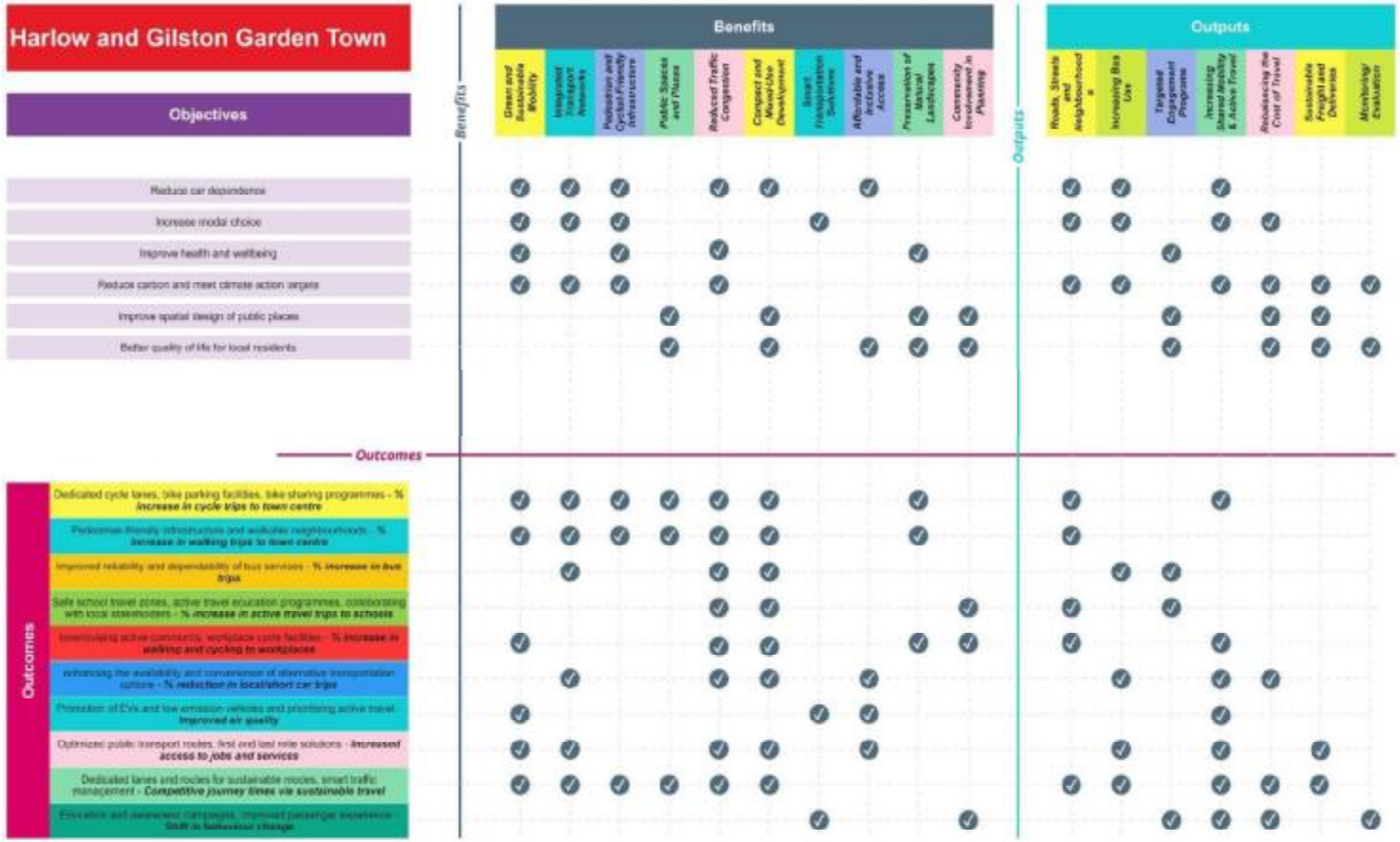


6. Framework Methodology

6.1 Overview

Below is an overview of the methodology applied to develop the Framework and its themes.

1. Review long list of interventions

The following information was documented on the delivery proposals:

More developed interventions:

a. Type of intervention (i.e., infrastructure/policy)

b. Funding status and source

c. Planning status

d. Delivery period and completion

Less developed interventions:

e. Who would be responsible for delivery

f. When it could be delivered

g. What it would impact (active, public transport, reduced vehicle

h. attractiveness, etc.)

i. Identified deliverability challenges

j. Identified benefits

2. Group interventions by theme

Themes reflect the key areas of targeted intervention that will contribute to modal transition. See Section 7 for details of the themes selected.

3. Prioritise interventions, or groups of interventions, within each of the themes.

Prioritisation was based on feasibility, deliverability, affordability and modal shift potential. These details were informed by comprehensive desktop research, a benchmarking exercise, and detailed discussions and workshops with officers working across all of the HGGT partner councils.

4. Set out prioritised interventions in a delivery pathway

The timings of intervention delivery are based on project dependencies and knowledge of delivery for similar schemes. Both short term (next 2 years) and long term (up to 2040) actions are included. The interventions have also been overlaid with the existing HGGT work plan.

5. Develop delivery scenarios

Three delivery scenarios (Business as usual, Ambition and Exemplar) have been set out in Section 8 to indicate the different potential pathways for achieving the modal transition objective. Particular interventions have been allocated to each scenario.

Scenario	Falling behind achieving the objectives for HGGT (BAU)	Trailing the target timeframes but progressing towards the objectives for HGGT (Ambition)	On track to achieve the objectives for HGGT (Exemplar)

6.2 Strategies, Programmes and Interventions

S — Strategies set out an agreed way to achieve an objective to ensure delivery is aligned strategically.

P — Programmes are a group of related interventions that combine to deliver an outcome (as set out in the strategy).

I — Interventions are activities that aim to deliver a specific output/outcome (as set out in the strategy).

The Framework has been developed on the basis that successful change requires a set of programmes that can deliver smaller tactical interventions. Programmatic approaches have been key to changing transport systems over a sustained period, especially where there has been a need to transition from places that overwhelmingly favour private transport to one which is more balanced and multi-modal.

In the following section, complementary schemes have been grouped into themes and selected based on them having similar principles and an understanding of what delivers value for money.

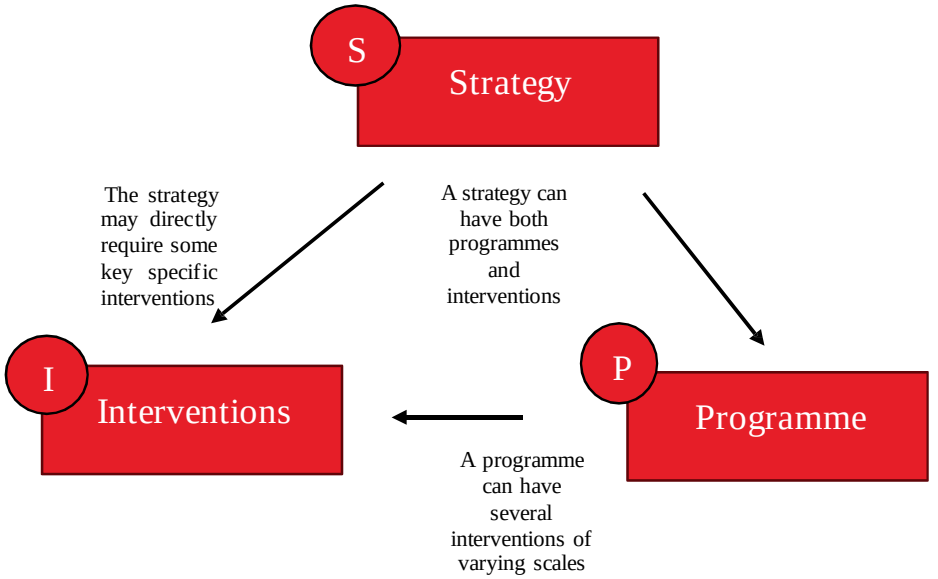


Figure 18: Relationship between strategies, programmes and interventions

7. Framework Themes

7.1 Introduction

The Framework has been set out according to six themes:

These themes reflect the key areas of targeted intervention that will contribute to modal transition. None of these themes alone will deliver the modal transition objectives for HGGT, however, delivering a mixture of interventions across all the themes will result in a more sustainable shift in behaviours.

For each theme, the following has been set out:

- Baseline situation
- How it supports the vision for HGGT
- What it will likely achieve
- Summary of components (what strategies, programmes or interventions sit within the theme)
- Prioritisation and suggested delivery timeframes
- Benefits, outcomes and evidence.

7.2 Road, Streets and Neighbourhoods

7.2.1 Introduction

What is the baseline situation?

Many of Harlow's neighbourhoods and main streets are car dominated, this not only encourages high levels of car use for short journeys but also makes active travel less attractive. The HGGT area is delivering improvements through the LCWIP and STC schemes. There is still a high share (23%) of very short[3] car journeys in Harlow.

Why does this theme support the Vision for the HGGT area?

Ensuring that appropriate road and kerb-side space is allocated evenly, and fairly to all modes including public transport, cycling and walking as well as ensuring dedicated facilities for pedestrian and cycling facilities are high quality, has been proved to increase sustainable travel uptake and therefore mode shift.

Short trips by private car are some of the easiest to change and by reducing the level of overall traffic on key streets, this can make walking and cycling safer, creating a positive reinforcement.

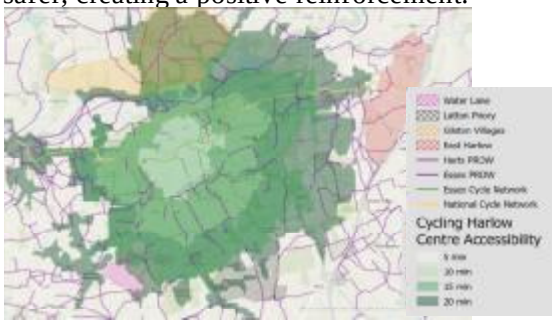


Figure 19: Harlow cycling catchment

What will it achieve?

There are multiple examples of investments in streets and neighbourhoods supporting significant modal shift. This also supports improved economic and health outcomes through active travel and improve quality of life through lower noise, better air quality and higher-quality local environments and places.

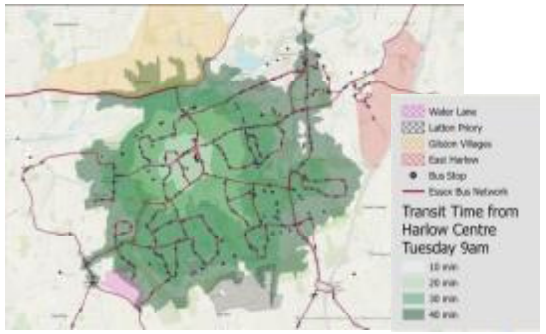


Figure 20: Harlow bus catchment

Figure 21: Harlow driving catchment

[3] Car trips less than 10 minutes in duration

7.2.2 Component Description

This summary table sets out the component parts of the roads, streets and neighbourhoods theme. It establishes which individual programmes or schemes are included within the theme, a description of what it entails, its likely influence on modal choice for users, some of the key challenges to deliverability or the scope of influence on modes and how it may be interpreted differently for the strategic sites.

Component	What is it?	How does it influence modal shift?	Key challenges	Strategic Sites
P **Healthy School Streets Programme**	Reducing drop-off activity on the access streets outside schools and colleges through timed or permanent restrictions for private cars. Improved safety around schools, delivering safe routes for walking, cycling and public transport access can be applied to new sites and to existing schools.	Safer experience for students and their parents/guardians to walk and cycle. This give less priority for vehicles drop off encourages uptake of active travel and is likely to achieve society wide support. Can be delivered quickly.	School catchments can cover areas outside walking and cycling distances beyond walking. Provision for the wider catchment needs to be maintained. Increased choice between schools means many residents travel medium and long distances to schools.	Establish any new school with in-built excellent active travel accessibility and priority for those travelling sustainably.
P **Liveable/Healthy Streets Programme**	Liveable streets aim to create cleaner and safer environments by "greening" streets and creating spaces where cars are guests to pedestrians and cyclists through a programme of interventions.	By making walking and cycling safer and more attractive more people make trips by sustainable modes.	Liveable streets require investment in improved road layouts and junctions in existing streets and can reduce highway capacity.	Strategic sites should be designed with the principle of liveable/healthy streets, in particular within mixed use areas.
P **Active Neighbourhoods Programme**	Delivering the proposed Active Neighbourhoods (neighbourhoods with reduced through-vehicle traffic) set out in the LCWIP.	Encourages shorter distance trips to be made by walking and cycling and could lead to changes in land use further into the future – improved local services.	High levels of ownership and car use means Active Neighbourhoods may increase some vehicle journey times and face local opposition.	New neighbourhoods should be designed to encourage walking and cycling rather than short car trips.
S **Town Centre Parking Strategy**	Investigating the potential of consolidating public vehicle parking allocations within the town centre and link to pricing with the aim of supporting cycle parking and shared mobility.	By reviewing the availability of private parking and increasing options for those travelling to Harlow town centre by sustainable modes such as walking and cycling and improved public realm this could significantly shift modes.	Many car parks are privately owned and operated. Local shops may rely (or have the perception of) on trade from those parking in the town centre. The case for increased sustainable travel providing the same level of trade as those travelling by car will be key.	Management of public parking at key demand attractors.

Table 4: Description of roads, street and neighbourhoods components

7.2.3 Local Impact

This summary table sets out the local impact analysis of parts of the roads, streets and neighbourhoods theme. Across each programme or scheme a number of key determinants are described, including what are the linked HGGT infrastructure elements that are already planned or under development, what key demographics will they impact, what is the spatial influence across different geographies, what is the likely share of movement trips and type that are impacts and finally, the likely scale of impact.

	Healthy School Streets	Liveable Streets	Active Neighbourhoods	Town Centre Parking Strategy
Linked HGGT Infrastructure Elements	Cycle and walking routes via schools LCWIP Routes 2, 4, 6, 7, 8 Active Neighbourhood 1-8	Radial Bus Radial Cycling Active Neighbourhood 1-8	Walking and cycling routes connecting Active Neighbourhoods Active Neighbourhood 1-8	All STCs LCWIP routes 1-8
Key Demographics	Children, families and young adults	All	Households in proposed neighbourhoods	Commuters and leisure trips into the town centre
Key HGGT Geography	Residential area and neighbouring schools	Town centre and other mixed land use areas	Residential areas identified by LWCIP and new residential areas	Town centre
Share of HGGT area trips impacted by intervention	10-15% of trips are to and from schools/colleges	23% of car trips* are less than 10 minutes in duration and could be walked/cycled	23% of car trips* are less than 10 minutes in duration and could be walked/cycled	55% of commuting* to Harlow employment is done by car. 45% of leisure trips are done by car*
Scale of Impacts	High	Medium	High	Medium

Table 5: Summary of local impact of roads, streets and neighbourhoods components

* *Doesn't include car passenger*

Delivery and Funding

This table summarises the elements of delivery and funding critical to the different components. It gives high level information regarding the source of funding, the type of funding and scale required, and indicative package costs, who is likely to lead on delivery of the scheme or programme and what is the role of HGGT in the delivery.

Component	Potential Source of Funding	Type of Funding			Indicative Package Cost (and how)	Proposed Delivery Organisation	Role of HGGT
		Resource	Capital	Revenue			
Healthy School Streets	Active Travel Fund (from Active Travel England)	£	££	£	Development: £50k Delivery: £30k-£100k -per school Dependant on scope and funding available – simple schemes such as multiple camera ANPR pedestrianisation enforcement costs an average of £60k and can return on costs through penalty enforcement	Harlow Essex Gilston Hertfordshire – (Potential challenge as HCC does not currently promote Healthy School Streets due to historic delivery challenges)	Develop case Oversight, Monitoring
Liveable Streets	Active Travel Fund (or equivalent) Harlow Council Developer Contributions	££	££	£	Development of Strategy: £40k Ongoing Programme: £100k Delivery dependant on designs	Harlow, Essex Gilston Hertfordshire	Engagement, consultation, develop Proposals
Active Neighbourhoods	Active Travel Fund (or equivalent) Harlow Council	£	££	£	Development: £50k Delivery: £100k per liveable neighbourhoods	Harlow Essex Gilston Hertfordshire and developers for strategic sites	Develop and Deliver
Town Centre Parking Strategy	Developed through HGGT	£	£	£	Development: £40k Delivery: TBD	Harlow Essex	Develop and Deliver

Table 6: Summary of delivery and funding considerations for roads, streets and neighbourhoods components

Key:
£ - Low
££ - Medium
£££ - High

Indicative Programme Cost

Arup has produced a high level indicative range of costs for the identified programmes, interventions and schemes. These are based on similar schemes developed for other local authorities, but for most costs there are significant scalability opportunities and challenges depending on the level of ambition and the exact proposal is taken forward. This would be confirmed through the development stage. Optimism bias has not currently been applied and all schemes are costed at current prices, with forecasts to 2050 made based on current prices, not accounting for varying levels of inflation. If schemes are delivered later or completed earlier this would also impact costs. The purpose of the costing is providing high level comparison of themes, not development of future budgets. Where development costs are identified, some could be delivered through internal resource if capacity and capability is available.

	Low Estimate	High Estimate
Capital Cost	£2,525,000	£5,050,000
Revenue Cost	£7,250,000	£,12,250,000
Development Costs	£180,000	£220,000

Table 7: Indicative HGGT area-wide programme costs for roads, streets and neighbourhoods components

7.2.4 Component Summary

This summary table sets out, for the roads, streets and neighbourhoods theme, the identified prioritisation for each programme or scheme, the likely delivery timeframes, the potential impact range of modal shift and key actions to be taken for each identified programme.

The prioritised components, including a breakdown of key tasks, allocated to a detailed annual programme, with greater short-term (to 2025) granularity is provided overleaf in Table 9.

Intervention	Short term Priority	Timeframes	Potential Impact Range	Key Action
Healthy Schools Streets	High	Short-term development, Medium-term delivery	1-4%	Develop a priority list of healthy school streets with a target to achieve school streets across all schools in the HGGT area by 2030.
Liveable Streets Programme	High	Short-term development, Medium-term delivery	1-5%	Establish a liveable/healthy streets programme to set out key design principles and work with Essex Highways to establish delivery programme.
Active Neighbourhoods	High	Short-term development, Medium-term delivery	1-5%	Consult and establish a proposal for delivery active neighbourhoods and begin consultation with residents building on the LCWIP.
Town Centre Parking Strategy	Low	Medium-term development and delivery	1-5%	Explore feasibility of delivering strategy with key partners, stakeholders and commission within next financial year. Gain

Table 8: Component summary table for roads, streets and neighbourhoods

7.2.5 Theme Prioritisation and Timeframes (short-term focus)

	2023	2024	2025	2026	2027	2028	2029/30	2031/32	2033/34	2035/40	Scenario Priority		
											BAU	Ambition	Exemplar
1. Healthy School Streets *1.2 Develop a strategy for community engagement and encourage schools to have a staff member who is responsible for sustainable travel, engagement or road safety* *1.2 Agree with Essex the forward plan of school streets delivery and future funding* *1.3 Priority list of healthy school streets based on agreed principles, high level costings and designs* *1.4 Consult on school streets proposals* ***Output: Agreed action areas with partner councils and strategy for implementation based on examples and community feedback***			C										
2. Liveable/Healthy Streets *2.1 Develop healthy streets evaluation process* *2.2 Use evaluation to make assessment of HGGT area streets* *2.3 Assess areas and opportunities where traffic and be reduced, consult with communities on views and embed alongside LCWIP schemes* *2.4 Identify high-priority measures to improve streets and include design principles for future highway development* ***Output: Agreed evaluation tool for strengths and weaknesses of streets and identified priority intervention areas***			C										
3. Active Neighbourhoods *3.1 Consult with active communities as proposed in LCWIP and engage them with a community led programme* *3.2 Prioritise space in/around key target areas for sustainable activity* *3.3 Identify prioritisation and packages for Active Neighbourhood delivery (on the basis of proposed consultation)* *3.4 Develop framework for educating communities to support behaviour change* ***Output: Transformed neighbourhoods supported by engaged and educated communities who can lead approach to neighbourhood transformation and support behaviour change***			C										
4. Town Centre Parking Strategy *4.1 Harlow undertaking feasibility plan on car parking proposed for 2024/25* *4.2 Long term strategy requiring engagement and consultation with partner authorities and communities*				C									

Table 9: Prioritised roads, streets and neighbourhoods programmes and timeframes for delivery (short term focus)

C Consultation

7.2.6 Theme Prioritisation and Timeframes (long term focus)

Whilst Table 9 on the previous page gives a more detailed breakdown of the short-term priorities up until the end of 2025, this section expands to the 2040 future year and sets out the longer term priorities. This is demonstrated in Table 10 below.

	2023	2024	2025	2026	2027	2028	2029/30	2031/32	2033/34	2035-40	Scenario Priority		
											BAU	Ambition	Exempla
Healthy School Streets													
Liveable/Healthy Streets													
Active Neighbourhoods													
Town Centre Parking Strategy													

Table 10: Prioritised roads, streets and neighbourhoods programmes and timeframes for delivery (long term focus)

Short term priority

Development

- Establish Liveable Streets Programme for the HGGT area.
- Establish Healthy School Streets Programme for the HGGT area.
- Establish Active Neighbourhoods Programme (objective criteria) for the HGGT area.
- Develop proposals for the Liveable Streets, School Streets and Active Neighbourhoods Programmes.
- Wider ambition for liveable streets roll out.
- Consultation on Active Neighbourhoods proposals within LCWIP.

Delivery

- Ensure proposals create healthy and safe residential environments

Medium term priority

Development

- Town centre parking allocation strategy (linked to pricing strategy) and improved, high quality town-wide cycle parking, including hubs linked to public transport access points.

Delivery

- Delivery of Healthy School Streets
- Delivery of key liveable streets on employment and town centre corridors
- Delivery of wider liveable streets
- Core Active Neighbourhoods delivered.

Long term priority

Development

- Town centre parking land use allocation Deliver wider liveable streets concept outside town centre.

Delivery

- Clear strategy, that has been consulted with partner councils and other relevant stakeholders with a clear direction on reducing attractiveness of town centre parking.
- Beneficial if strategy aligns with direction of other parking council's approach to town centre parking strategy as not to detract from the HGGT area amongst the wider geography.

7.2.7 Benefits, outcomes and evidence

This section sets out the wider benefits that can be achieved (linked to the benefits map) through the delivery of the components that make up the roads, streets and neighbourhoods theme. It also demonstrates case studies of where similar has been developed and examples of how this could happen in the HGGT area and some outcomes that could be realised.

Wider Benefits

- Increased access to education, employment, leisure and social amenities for those without vehicles.
- Improved health outcomes for the local community through improving air quality and encouraging active travel.
- Reduced congestion in town centres making them more vibrant and enjoyable to be in.
- Opportunities for compact and mixed-used development through integrating residential, commercial and recreational spaces within close proximity.

Where has it been adopted?

- **Case study 1 – Brentwood and Braintree Healthy School Streets:** Small infrastructure changes improving roads around schools to mitigate congestion and improve active travel experience such as resurfacing, bollards to prevent pavement parking, refreshing zebra crossings, updating signage and temporary street art to improve the look and feel of the surrounding streets.

- **Case study 2 – TfGM Active Neighbourhoods:** Movement of people is prioritised over cars, typically by using planters or bollards to stop through access, making it safer and easier to ger around on foot or by bike. Co-designed with communities.

Example 1 – School Travel

With the new schools' streets most children are now travelling to school by walking or bike, with less traffic at the school gates and secure cycle storage. This frees up more time for travelling to work, enabling me cycle or take the bus.

Example 2 – High Street Business Owners

New liveable streets have improved the local high streets, making it a far more attractive place for a community to stop and shop, secure cycle parking and better quality of benches has encouraged more people to spend time locally.

7.3 Increasing Bus Use

7.3.1 Introduction

What is the baseline situation?

Bus use in the HGGT area is currently low at only 3-5% of mode share. This is largely a result of high car ownership (78%), and because most employment, leisure and retail land uses are more easily accessible by car. Often these destinations are also accompanied by affordable (or in some cases free) car parking, which does not feel comparable to bus fares. HGGT is characterised by a high proportion of shift work which bus timetables may not accommodate as buses are considered infrequent and not operating a 'turn-up-and go' service. Further, the current £2 bus fare cap initiative is planned to end in December 2024 which may have a negative impact on bus patronage.

The HGGT area is investing in the STCs and related infrastructure which will provide increased bus priority through dedicated lanes and improved junctions. Longer term plans for connecting the town with growth areas are also being considered.

Why does it support the Vision for the HGGT area?

To achieve the vision and objectives for HGGT in terms of sustainable growth, bus use will need to increase from its low base, specifically through providing improved access to employment sites and the Harlow town centre. From reviewing best practice and through benchmarking with other high performing comparable towns and cities, high-quality, frequent buses can attract up to and around a15% mode share. Buses are proven to be more efficient in their use of road space than cars, and this can be enabled through the delivery of dedicated priority infrastructure.

What will it achieve?

Improving the bus network through better bus priority and redesigning the bus network should improve the attractiveness of the bus network and support higher frequency services – key is growing further demand through the right fares and incentives which could create a step change in bus use.

The bus network and support higher frequency services- key is growing further demand through the right fares and incentives which could create a step change in bus use.

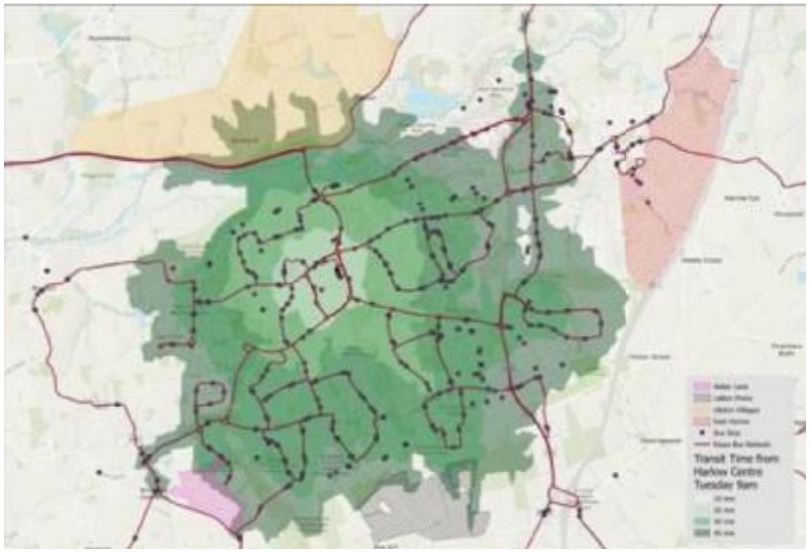


Figure 22: Existing bus travel catchment for Harlow

7.3.2 Component Descriptions

This summary table sets out the component parts of the increasing bus use theme. It establishes which individual programmes or schemes are included within the theme, a description of what it entails, its likely influence on modal choice for users, some of the key challenges to deliverability or the scope of influence on modes and how it may be interpreted differently for the strategic sites.

Component	What is it?	How does it influence modal shift?	Key challenges	Strategic Sites
STC Service Provision Specifications	The service proposition to maximise the bus priority of the STC programme.	By unlocking faster journey times and higher levels of relatability to make a step change in bus provision and attractiveness of services.	Ensuring STC corridors are designed to enable high quality bus services but delivering the required service levels which maximise usage will require funding as demand grows, with limits on what S106 can fund. Increasing bus provision may require additional land for serving and depots.	All proposed strategic housing sites will be connected to the town centre by STCs with potential extensions proposed.
Bus Service Improvement	Using the BSIP process to support the development of improved bus network.	Buses provide attractive competition to cars over short and medium journeys when service frequencies and prices are competitive.	Delivering long term sustainable levels of bus demand to support a high frequency bus service or requirements for ongoing subsidy with LTAs facing challenging funding environment across the region. Increasing bus provision may require additional land for serving and depots.	Opportunity for designing bus priority and infrastructure into sites and supporting new routes.
Harlow Town and Villages Demand-Responsive Transport (DRT)	An on-demand bus service where riders can request trips to either open ended or fixed locations.	DRT can provide improved service compared to low frequency timetabled services for lower density development.	Requires ongoing operational support and subsidy during early years and depot facilities.	Ensuring DRT is considered as part of road layouts in new developments for example potential waiting areas,
Harlow Ticketing / MaaS / Price Cap	An HGGT integrated ticket covering all modes of sustainable transport.	By providing truly integrated ticketing.	Public transport operators currently focus on individual modal tickets.	One proposal would be applicable for the HGGT area and the strategic sites.

Table 11: Description of increasing bus use components

7.3.3 Local Impact

This summary table sets out the local impact analysis of parts of the increasing bus use theme. Across each programme or scheme a number of key determinants are described, including what are the linked HGGT infrastructure elements that are already planned or under development, what key demographics will they impact, what is the spatial influence across different geographies, what is the likely share of movement trips and type that are impacts and finally, the likely scale of impact.

	STC Service Provision Specifications	Bus Service Improvement	Harlow Ticketing / MaaS / Price Cap	Harlow Town and Villages DRT
Linked Infrastructure Elements	STC corridors and the four strategic development sites they will connect with Bus Station.	STC corridors and the four strategic development sites they will connect with Bus Station.	N/A	N/A
Key Demographics	• Intra HGGT Commuters • Low Income Families • Rail Station Access	• Intra HGGT Commuters • Low Income Families • Rail Station Access	All	New Garden Village Residents
Key HGGT Geography	• STC N2C – Harlow Town Station, Town centre, Gilston Villages, Town Park • STC S2C – Town centre, Latton Priory, Stewards • STC E2C – Town centre, Netteswell, London Road Enterprise Zone, Newhall, East of Harlow, M11 J7a • STC W2C – Town Centre, Public Health England, Pinnacles Employment Area, Water Lane, Katherines	LA wide	LA wide	Garden Villages
Share of Trips Impacted	Currently 5% use buses but STC services could increase use by a further 5%	Wider routes outside the STC	Improving ticketing across the LA to enable mixed mode will improve the success of multiple modes.	DRT has been successful in rural areas but impact likely to be limited to areas implemented.
Scale of Impacts	High	Medium	Low	Medium

Table 12: Summary of local impact of increasing bus use components

7.3.4 Delivery and Funding

This table summarises the elements of delivery and funding critical to the different components. It gives high level information regarding the source of funding, the type of funding and scale required, and indicative package costs, who is likely to lead on delivery of the scheme or programme and what is the role of HGGT in the delivery.

Component	Source of Funding	Type of Funding			Indicative Package Cost (and how)	Proposed Delivery Organisation	Role of HGGT
		Resource	Capital	Revenue			
STC Service Provision Specifications	BSIP+ Funding Developer Funding Operator Funding	£	(STC costs not included)	£££	**Develop STC services proposals and funding proposal incl. developer funding proposal** £40k	Essex HGGT Harlow Hertfordshire	Develop Service Provision for STC routes
Bus Service Improvement	BSIP+ funding Essex Developer Funding	£	££	£££	**Wider Bus Service Route plan** £20k Future revenue funding dependant to be agreed depending on future BSIP funding	Essex HGGT Harlow Hertfordshire	Develop plans to maximise bus use to feed development of future Essex/Hertfordshire BSIP
Harlow Ticket / MaaS / Price Cap	HGGT/Essex	££		££	**Development of MaaS:** £75k – 200k *depending on complexity*	Transport Operators HGGT Essex Hertfordshire	Appendix BDevelop concept for integrated ticketing/MaaS with stakeholders latching on to existing systems which can be moulded into HGGT needs due to cost of bespoke system
Harlow Town and Villages DRT	Developer funding DfT funds Hertfordshire/ Essex	£££	££	££	**Development:** £80k for app **Capital:** £12k per vehicles **Revenue:** £25-10k per vehicles + wages *Cost varies significantly depending on scale and service requirement*	Essex Hertfordshire HGGT	Develop concept for DRT serving HGGT strategic sites and town, develop funding package or facilitate service agreements between Herts and Essex to allow existing DRT services to be cross-authority and serve existing areas not well serviced

Table 13: Summary of delivery and funding considerations for increasing bus use components

Key:
£ - Low - ££ - Medium - £££ - High

Indicative Programme Cost

Arup has produced a high level indicative range of costs for the identified programmes, interventions and schemes. These are based on similar schemes developed for other local authorities, but for most costs there are significant scalability opportunities and challenges depending on the level of ambition and the exact proposal is taken forward. This would be confirmed through the development stage. Optimism bias has not currently been applied and all schemes are costed at current prices, with forecasts to 2050 made based on current prices, not accounting for varying levels of inflation. If schemes are delivered later or completed earlier this would also impact costs. The purpose of the costing is providing high level comparison of themes, not development of future budgets. Where development costs are identified, some could be delivered through internal resource if capacity and capability is available. Bus capital investment in the STC and Bus Station have not been included. Additional revenue due to bus level improvements may offset costs or bus infrastructure such as new depot facilities which might be required.

	Low Estimate	High Estimate
Capital Cost	£200,000	£400,000
Revenue Cost	£21,200,000	£41,800,000
Development Costs	£230,000	£400,000

Table 14: Indicative HGGT area-wide programme costs for Increasing Bus Use components

7.3.5 Component Summary

This summary table sets out, for the increasing bus use theme, the identified prioritisation for each programme or scheme, the likely delivery timeframes, the potential impact range of modal shift and key actions to be taken for each identified programme.

The prioritised components, including a breakdown of key tasks, allocated to a detailed annual programme, with greater short-term (to 2025) granularity is provided overleaf in Table 16.

Intervention	Short term Priority	Timeframes	Potential Impact Range	Key Action
STC Service Provision Specifications	High	Short-term development, medium- term delivery	5-10%	Develop and agree service provision using STCs as they are built and operational with proposals for turn-up and go services on key routes
Bus Service Improvements (non STC)	High	Short-term development, medium- term delivery	1-2.5%	Undertake early bus network review to identify options including evaluation of hub and spoke model
Harlow Ticketing/MAAS/Price Cap	Low	Medium-term development and delivery	0-2%	Work with Essex/Hertfordshire and transport operators on future options for integrated ticketing as part of the shared mobility framework
Harlow Town and Villages DRT	Low	Medium-term development and long- term delivery	0-1%	Work with developers to understand potential for how DRT could serve lower density parts of the Garden Villages and key transport hubs like bus stations and railway stations

Table 15: Component summary table for increasing bus use

7.3.6 Theme Prioritisation and Timeframes (short-term focus)

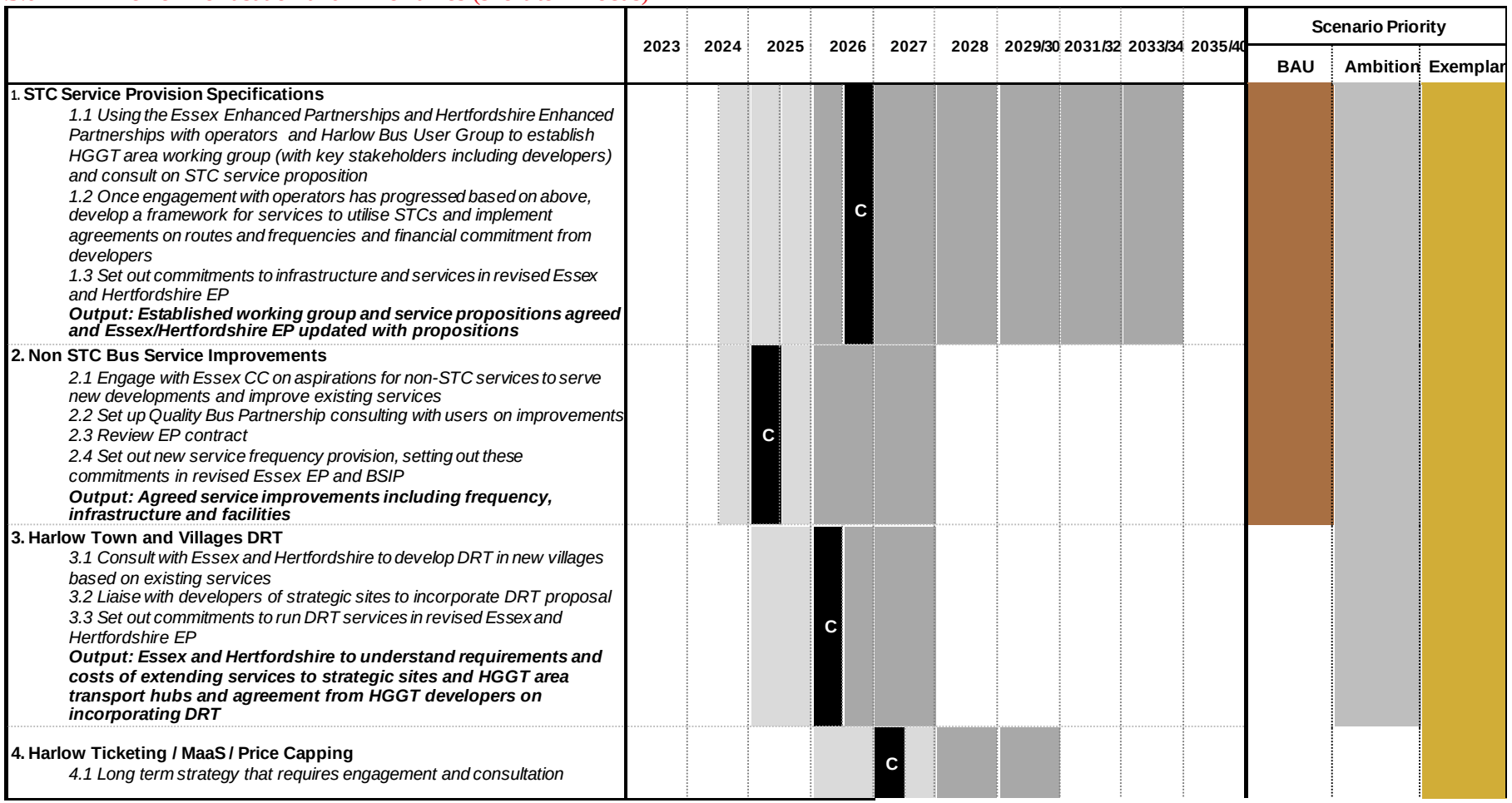
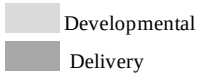


Table 16: Prioritised increasing bus use programmes and timeframes for delivery (short term focus)

7.3.7 Theme Prioritisation and Timeframes (long term focus)

Whilst Table 16 on the previous page gives a more detailed breakdown of the short-term priorities up until the end of 2025, this section expands to the 2040 future year and sets out the longer-term priorities. This is demonstrated in Table 17 below.



	2023	2024	2025	2026	2027	2028	2029/30	2031/32	2033/34	2035-40	Scenario Priority		
											BAU	Ambition	Exemplar
STC Service Provision Specifications													
Bus Service Improvements													
Harlow Town and Villages DRT													
Harlow Ticketing / MaaS / Price Cap													

Table 17: Prioritised increasing bus use programmes and timeframes for delivery (long term focus)

Short term priority

Development

- STC service proposition specification
- Bus Service Improvements proposition for short/medium/long term
- Engage with Essex/Hertfordshire EP delivery teams

Delivery

- Deliver service improvements, and incorporate STCs into service routes

Medium term priority

Development

- Harlow Ticketing MaaS proposal developed with operators
- Harlow Town and Villages DRT proposal

Delivery

- STC corridor services
- BSIP service improvements
- Fare capping

Long term priority

Development

- Services planned to incorporate strategic developments and connecting STCs
- Harlow MaaS/ticketing proposal consulted on, and a delivery strategy has been developed with operators

Delivery

- The HGGT area's public transport mode options can be utilised using one platform and associated form of ticketing

7.3.8 Benefits and Evidence

This section sets out the wider benefits that can be achieved (linked to the benefits map) through the delivery of the components that make up the increasing bus use theme. It also demonstrates case studies of where similar has been developed and examples of how this could happen in the HGGT area and some outcomes that could be realised.

Wider Benefits

- Support low income and car free households with better access to services and improved journeys and access to employment
- Enables additional development on land use in city centres
- Enable households to reduce car dependency and alleviate cost pressures on households without the cost of car ownership
- Increased accessibility and ease of travel which contributes to more efficient movement

Where has it been adopted

- **Case study 1 - Coventry Mobility Credit Pilot:** Trial scheme where residents are given credits to spend on sustainable travel, including buses, in return for scrapping an older car.
- **Case study 2 – Surrey Connect:** Developing a DRT for Mole Valley and extension to new neighbourhoods has replaced lost bus services with trips available on demand.
- **Case Study 3: Crawley Fastway:** Delivered 10% growth in bus passengers over 10 years with 20% of Crawley residents travelling to work by bus.

Example 1 - Buses Providing Access

Improved bus services have enabled better connections and lower fares from residential areas into employment sites at Pinnacles and the town centre. With more regular services, demand has increased creating a more sustainable bus service and improved access to economic opportunities.

Later evening services also mean passengers can use the bus service for more leisure services and supports workers in healthcare and hospitality, for example.

Example 2 - Linking Housing and Transport Nodes

New housing developments in Gilston are connected into key transport nodes at the railway station, high frequency buses via the STC's, and new bus station via DRT. This makes the new development attractive for commuters to who can easily connect to jobs by integrated public transport or travel into the town centre for leisure without using a car, this keeps car ownership lower and makes the developments an attractive environment for walking and cycling.

7.4 Increasing Shared Mobility and Active Travel

7.4.1 Introduction

What is the baseline situation?

Walking is currently the most common choice for journeys under 10 minutes. Cycling is not particularly a popular mode within the HGGT area with only 5% of journeys being made by bike. The HGGT area has a number of dedicated walking and cycling routes however these often do not directly link to neighbourhoods which are often car centric and dominated by parked cars and traffic flows.

There are currently very limited shared mobility options within the HGGT area but there is good potential for solutions in the future that will provide viable options away from private car use. With HGGT comprising a partnership of 5 separate Local Authorities, no single Authority can currently deliver comprehensive shared mobility or MaaS for HGGT.

The HGGT Shared Mobility Feasibility Study concluded that the potential exists to support the introduction of both bike share and car clubs in the existing HGGT area based upon meeting the needs of existing residents, businesses and visitors to the town centre and surrounding neighbourhoods, with scope for such services to be expanded to meet growing demand, potentially some demand may be absorbed from other transport modes but shared mobility can increase the sustainable options available for many trips.

Why does it support the Vision for the HGGT area?

Increasing walking and cycling (and potentially scooting) rates are key to meeting the objectives of HGGT and the 50% sustainable trips mode share. The cycling proposition needs to support the growth of cycling in existing communities this includes improved storage and facilities and an improved range of active travel options such as access to cycle hire. Shared Mobility services, for example cycle hire and car club, are identified in the HGGT Transport Strategy as important to enable modal transition, alongside good placemaking and the investment in active and sustainable transport infrastructure, to achieving the HGGT targets for active and sustainable travel.

What will it achieve?

Improving provision for active travel and increasing shared mobility will improve the attractiveness and flexibility of sustainable transport modes The benefits of shared mobility include decreasing the cost of sustainable transport through increased flexibility and pricing making this is an attractiveness alternative to private car use. Shared mobility options can also reduce overall journey times by sustainable transport modes and therefore ensuring travel time is more comparative with that of those trips taken by car.

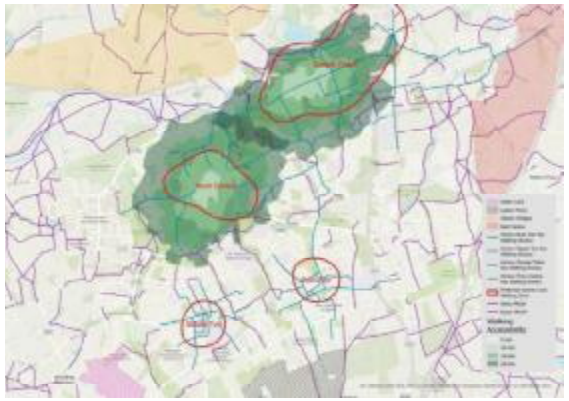


Figure 23: Town Centre and Templefields Walking Catchment

Figure 24: Existing Cycle Routes and Proposed LCWIP Routes

7.4.2 Component Description

This summary table sets out the component parts of the shared mobility and active travel theme. It establishes which individual programmes or schemes are included within the theme, a description of what it entails, its likely influence on modal choice for users, some of the key challenges to deliverability or the scope of influence on modes and how it may be interpreted differently for the strategic sites.

Component	What is it?	How does it influence modal shift?	Key challenges	Strategic Sites
Shared Mobility Framework	A procurement/partnership framework approach that details the scope of shared mobility services that can be procured.	Provide a viable procurement route in which shared mobility services and products can be designed and delivered.	Resource within HGGT and partners is required to dedicate focus in progressing with this work. Currently being resourced in addition to core roles and has led to slow progress in establishing and embedding the framework.	HGGT growth comprises delivery of a number of separate new development. There is a risk without co-ordination that piecemeal measures in this space could fail to offer a realistic alternative to the private car and could conflict and undermine each other.
Mobility Hubs	Developing multi-modal interchanges between active modes, public transport and micro mobility in existing and new communities.	Enables users to change modes efficiently, and first and last mile trips are integrated with medium and long-distance public transport journeys.	Identifying appropriate sites in new and existing communities and ensure that providers include the required level of modal integration.	New strategic housing sites. Residential and employment areas for end-to-end trips.
Car Clubs	Car clubs offer vehicles for hire for members from locations near to where people live. Members can book cars in a variety of ways: online, by mobile app, or over the phone. They can access the car via a smart card or smartphone application. Members can use any car from a club's entire network across the UK. Car club operators typically own or lease their vehicles that are made available to their members for short-term use. The car club covers all the costs of owning and operating the vehicles.	Can support lower car ownership by providing car accessibility when required for trips not possible by public and active transport, for short trips by those without private car access.	Traditional success in car clubs has come in areas with high cost of car ownership and dense land use without access to private parking, and where there is a high level of commuting by public transport. Private companies will want a profitable operation.	Car club infrastructure could be included in new developments where dedicated car parking is limited.
Cycle Storage Linked to LCWIP	Providing safe, on-street cycle storage to support journeys to and from work and other destinations, without the need for space at home.	Enables more trips by cycling through the provision of dedicated secure storage in place of on-road parking in residential and employment areas.	Allocating space for secure cycle parking at the expense of curb side parking. Requirement of proper maintenance to have long term impact.	As appropriate include secure cycle storage in proposals.
E-Bike Scheme	Supporting residents in using E-Bikes through hire schemes or private ownership. Local authorities loan bikes to residents for a trial or offer interest free loans. Some schemes also have E-bikes available for rent for businesses and residents.	E-Bikes provide competition with cars on medium distance journeys' and those with less ability to cycle longer distance or can also be used to replace some servicing trips.	Secure storage for E-Bikes and high up-front costs for individual users, some challenges over low levels of familiarity	As appropriate include alongside standard cycle secure storage, potential to include E-bikes as alternative to high car provision.
Cycle Hire Scheme	Cycle hire for short periods usually costed per mile/km with an unlock fee. Initial promotions can be used to encourage uptake.	Enables short trips around a town centre for those without access to a bicycle. Can include E-Bikes.	Many cycle hire schemes require ongoing subsidy. It can create impacts on streets through poor bike parking, this can be mitigated through requiring trip-end points to be in specific areas.	Ensuring that any cycle hire scheme can easily be expanded into new areas and incorporated into new developments.

Table 18: Description of shared mobility and active travel components

7.4.3 Local Impact

This summary table sets out the local impact analysis of parts of the shared mobility and active travel theme. Across each programme or scheme a number of key determinants are described, including what are the linked HGGT infrastructure elements that are already planned or under development, what key demographics will they impact, what is the spatial influence across different geographies, what is the likely share of movement trips and type that are impacts and finally, the likely scale of impact.

	Mobility Hubs	Car Clubs	Cycle Storage Linked to LCWIP	E-Bike Scheme	Cycle Hire Scheme
Linked HGGT Infrastructure Elements	Latton Priory, Gilston Villages, East of Harlow and Water Lane Mobility Hubs Existing hubs in Harlow	Latton Priory and Gilston Villages Mobility Hub	• Radial Bus • Radial Cycling • LCWIP Routes 1-9	Strategic development's mobility hubs	Strategic development's mobility hubs
Key Demographics	Residents or young professionals without cars	Residents without cars or single car families (north and central Harlow) Users are typically split 80% residential with 20% business use ranging from SMEs to large corporates and local authorities.	Residents without cars or secure off road bike storage	Internal Commuters	City centre workers and younger demographic
Key HGGT Geography	Gilston Villages, Latton Priory, East of Harlow and Water Lane. Existing hubs at the central Transport Interchange, Harlow Town and Mill railway stations, PAH and employment areas. Mobility hubs should be co- located and integrated into the village centre, next to amenities. However, this will be dependent on the detailed planning of the development and clearly needs to be integrated with car-free areas and cycling and walking routes.	North and central Harlow where car ownership is lower than in other areas.	• Edinburgh Way • Town Centre • Rail Stations • Residential areas with LCWIP connections	All	Town centre including key nodes such as the railway station and bus station
Share of HGGT area trips impacted by intervention	Gilston and Latton Priory around <5% of future trip share	0-1%	0-2%	0-1%	0-2%
Scale of Impacts	High	High	Medium	High	High

Table 19: Summary of local impact of shared mobility and active travel components

7.4.4 Delivery and Funding

This table summarises the elements of delivery and funding critical to the different components. It gives high level information regarding the source of funding, the type of funding and scale required, and indicative package costs, who is likely to lead on delivery of the scheme or programme and what is the role of HGGT in the delivery.

Component	Source of Funding	Type of Funding			Indicative Package Cost (and how)	Proposed Delivery Organisation	Role of HGGT
		Resource	Capital	Revenue			
Shared Mobility Framework	Internal Resource	££	-	£	Around £30k to develop a shared mobility framework, ongoing resource to manage contracts.	HGGT and partners	Framework lead as co-ordinating body
Mobility Hubs	Developer Contributions and Developer Delivery	£	£££	£	Highly dependent on scale but small mobility bubs are around £500k -£1m per site	Developers All partners	Establish branding approach and integrate with bus theme
Car Clubs	Developer Contributions and Harlow and Essex working with a commercial partner	£	£	£	Some car clubs operate on commercial basis but can require up front support and some capital funding.	All partners	Lead on framework development to ensure consistency of approach
Cycle Storage Linked to LCWIP	DfT Harlow Council	£	£	£	Cycle hangers for residential areas cost £3,000 per hanger with most councils charging an annual fee for access. 10 hangers programme is likely to cost £30k per year	All partners	Integration role across themes
E-Bike Scheme	Developer Funding HGGT partners, DfT grants	£		£	Appendix CFor local authorities, the cost is between £3-£5k per unit for e-assisted hire bikes. (CoMo UK)	All partners	Lead on framework development to ensure consistency of approach
Cycle Hire Scheme	Harlow and Essex working with a commercial partner	£	£	££	Cycle hire schemes mostly operate on a commercial basis but may require some up-front development/ financial support depending on scale Appendix D100% pedal bike fleet costs £1.5k - £2.5k per unit (CoMo UK)	All partners	Lead on framework development to ensure consistency of approach

Key:
£ - Low
££ - Medium
£££ - High

Table 20: Summary of delivery and funding considerations for share mobility and active travel components

Indicative Programme Cost

Arup has produced a high-level indicative range of costs for the identified programmes, interventions and schemes. These are based on similar schemes developed for other local authorities, but for most costs there are significant scalability opportunities and challenges depending on the level of ambition and the exact proposal is taken forward. This would be confirmed through the development stage. Optimism bias has not currently been applied and all schemes are costed at current prices, with forecasts to 2050 made based on current prices, not accounting for varying levels of inflation. If schemes are delivered later or completed earlier this would also impact costs. The purpose of the costing is providing high level comparison of themes, not development of future budgets. Where development costs are identified, some could be delivered through internal resource if capacity and capability available.

	Low Estimate	High Estimate
Capital Cost	£2,660,000	£5,320,000
Revenue Cost	£5,625,000	£7,500,000
Development Costs	£290,000	£290,000

Table 21: Indicative HGGT area-wide programme costs for Increasing Shared Mobility and Active Travel

7.4.5 Component Summary

This summary table sets out, for the shared mobility and active travel theme, the identified prioritisation for each programme or scheme, the likely delivery timeframes, the potential impact range of modal shift and key actions to be taken for each identified programme.

The prioritised components, including a breakdown of key tasks, allocated to a detailed annual programme, with greater short- term (to 2025) granularity is provided overleaf in Table 23.

Intervention	Short term Priority	Timeframes	Potential Impact Range	Key Action
Shared Mobility Framework	High	Short-term	NA	Develop a procurement/partnership framework approach and review scope of services to be procured.
Mobility Hubs	High	Short-term development, medium-term delivery	0-5%	Establish key mobility hub locations and modal requirements in each location in line with ECC's mobility hub guidance
Car Clubs	Medium	Short-term development, medium-term delivery	0-1%	Engage with car club providers on the opportunity in the HGGT area and required support for car club scheme.
Cycle Storage Linked to LCWIP	Medium	Short-term development and delivery	0-1%	Develop scheme to enable the installation of cycle storage in areas with new cycle facilities where residents require it.
E-Bike Scheme	Low	Short-term development and delivery	0-1%	Work with neighbouring authorities to understand impact of E-Bike rental schemes.
Cyle Hire Scheme	Low	Short-term development and delivery	0-2.5%	Engage with operators on option for delivering cycle hire and consideration of local impacts (e.g. need for dedicated parking zones).

Table 22: Component summary table for shared mobility and active travel

7.4.6 Theme Prioritisation and Timeframes (short-term focus)

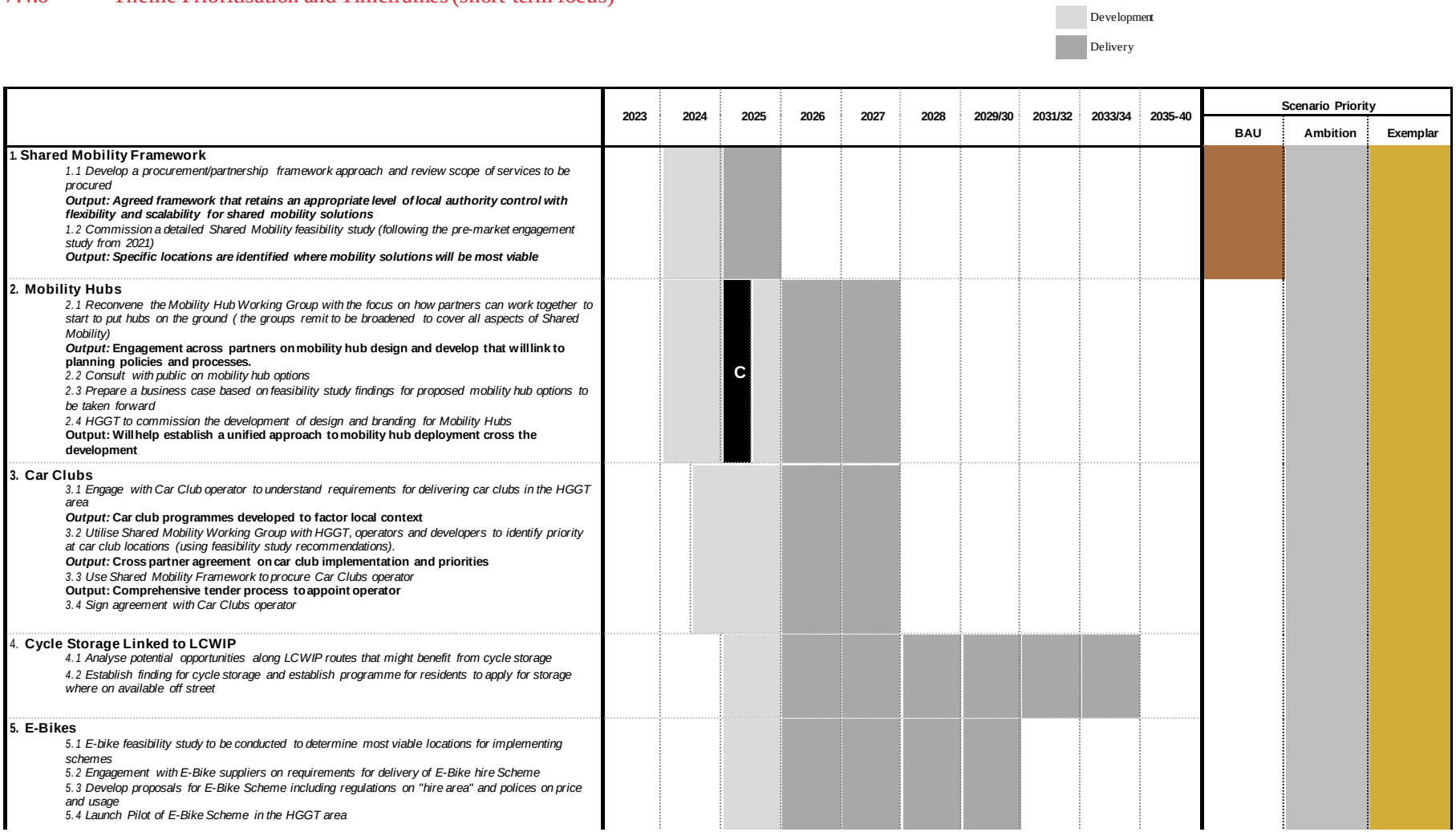


Table 23: Prioritised shared mobility and active travel programmes and timeframes for delivery

C Consultation

7.4.7 Theme Prioritisation and Timeframes (long-term focus)

Whilst Table 23 on the previous page gives a more detailed breakdown of the short-term priorities up until the end of 2025, this section expands to the 2040 future year and sets out the longer-term priorities. This is demonstrated in Table 24 below.

Development

Delivery

Table 24: Prioritised shared mobility and active travel programmes and timeframes for delivery (long term focus)

	2023	2024	2025	2026	2027	2028	2029/30	2031/32	2033/34	2035-40	Scenario Priority		
											BAU	Ambition	Exempla
Shared Mobility Framework													
Mobility Hubs													
Car Clubs													
Cycle Storage linked to LCWIP													
E-Bikes													

Short term Priority

Development

- Develop framework for shared mobility based on a procurement and partnership approach and review scope of services to be procured
- Consult on mobility hubs with communities and developers of strategic sites

Delivery

- Create shared mobility user group and use framework and reconvene Mobility Hub
- Working group to begin steps for delivery

Medium Priority

Development

- Prepare business case for mobility hubs Analyse potential opportunities for cycle storage along LCWIP routes
- Evaluate feasibility of E-Bikes including locations
- Engage with Car Club providers

Delivery

- Deliver cycle storage and establish programme for residents to apply for storage

Long Priority

Development

- Launch pilot cycle hire and mobility hub schemes upon completion of all procurement and feasibility processes
- Sign agreement with chosen Car Club operator

Delivery

- Launch full cycle hire, E-Bike, Car Club and Mobility Hub scheme for users and monitor uptake and impact on trips

7.4.8 Benefits and Evidence

This section sets out the wider benefits that can be achieved (linked to the benefits map) through the delivery of the components that make up the shared mobility and active travel theme. It also demonstrates case studies of where similar has been developed and examples of how this could happen in the HGGT area and some outcomes that could be realised.

Wider Benefits

- Increased active travel for access to education
- Reduced air quality impacts on key local streets including school
- Reducing the environmental impact of transport to support a healthier and more sustainable community
- Improved access to local facilities
- Increased accessibility to town centres
- Enhanced safety of pedestrian and cycling infrastructure
- Improved health of local community
- Increase use of existing services and new usage of new infrastructure

Where has it been adopted?

- **Case study 1 – Exeter Co Cars Mobility Hub:** Award winning mobility hub giving residents of a new development in Exeter access to shared, public and active travel options.

- **Case study 2 – Redbridge Mobility Hubs:** The UK's first accredited mobility hub, the South Woodford mini-hub has an electric car club bay, seating, water fountain, cycle parking and flora within a reclaimed parking space, as well as adjacent bus stops and a tube station.

Example 1 – Shared Mobility

Using mixed modes of public and active travel has become easier with growing use of shared mobility services and the new mobility hubs.

Increasingly people are using both traditional or E-Bikes to access the improving bus network, whilst the stop is a bit further from our house the stop has safe storage for bikes, and as an extra bonus we can pick up parcels on the way home.

Example 2 – Cycle Parking

For those without a car, Harlow has become much easier to live in thanks to improvements in shared mobility. Rather than own a car, when needed, residents can book one through the car club or hire a variety of different bikes or wheels.

However, rather than always use a car, it's more affordable to use local public transport or cycle, with improved cycle storage outside homes, work and stations meaning bikes are safe.

7.5 Targeted Engagement Programmes

7.5.1 Introduction

What is the baseline situation?

There are existing pockets of good practice as delivered by ECC, working with local businesses and schools to promote sustainable transport use. A good example is the Smarter Travel for Essex Network (STEN) which helps businesses with 50+ employees prepare and implement effective travel plans to promote and encourage active and sustainable travel. Currently other programmes are largely focused on areas such as Colchester and Braintree with no activity of programmes with large trip generators taking place within the HGGT area. In order to meet the HGGT modal transition targets, a larger scale travel behaviour change programme is required to promote more sustainable travel patterns to places of employment, new housing developments, schools, colleges and for leisure purposes. These include specific projects being pursued by the ECC Sustainable Travel Planning Team (STPT) and other partners supporting sustainable travel initiatives, providing the framework to achieve more through a coordinated approach.

Why does it support the Vision for the HGGT area?

Engaging with schools, businesses, the local community and new residents in the strategic sites will be vital in encouraging the prevalence of walking, cycling and the use of public transport. It is essential in promoting sustainable development, reducing car dependency, supporting the sustainable distribution of goods and encouraging safer places for communities. Ensuring sustainable access to businesses and schools helps unlock the growth ambition and provides an opportunity to level inequality through increasing access to education and employment by sustainable transport modes.

What will it achieve?

Working with large trip generators such as schools and businesses to reduce their single car occupancy use will have a significant impact on modal transition. Sustainable transport initiatives aimed at education, employment and residential sites in particular will provide focused cohorts within which activity can be progressed and more easily monitored.

Figure 25: Mode shift STARS – Centre of Excellence for the delivery of Effective Travel Plans in Education, Business and Residential Settings

7.5.2 Component Description

This summary table sets out the component parts of the targeted engagement programme theme. It establishes which individual programmes or schemes are included within the theme, a description of what it entails, its likely influence on modal choice for users, some of the key challenges to deliverability or the scope of influence on modes and how it may be interpreted differently for the strategic sites.

Table 25: Description of targeted engagement programme components

Component	What is it?	How does it influence modal shift?	Key challenges	Strategic Sites
School Travel Scheme	Liaising with schools to understand current provisions of travel support and barriers to using sustainable travel, supporting them in the tailored development of a travel scheme to encourage sustainable travel and utilise new or improved sustainable travel opportunities, while monitoring student travel behaviour.	Supports key target demographics in utilising sustainable travel opportunities through engaging with schools and understanding barriers to sustainable travel. Monitors travel behaviour to better understand patterns and use to tailor plan more effectively.	School catchments can cover areas outside walking and cycling distances beyond walking, provision for the wider catchment needs to be in place also. Lack of resources and capacity within schools to support modal transition.	Developed and in place at schools across wider HGGT area, so when primary and secondary schools within strategic sites are open, they can be implemented from the outset and be further advanced based on learnings and recommendations from other HGGT area schools.
Pathfinder Businesses and Institutions	Working with key employers to identify opportunity to partner in promoting sustainable travel to commuting and creation of a network of businesses to simplify engagement and gain feedback from businesses and institution on approaches and initiatives.	Businesses and instructions are directly engaged with on sustainable travel and can be used to promote better mobility choices among customers and employees, while acting as a soundboard to help improve initiative effectiveness.	Finding incentives for some businesses to act to reduce vehicle trips at their own monetary or time cost. Encouraging engagement during constrained business hours. Public sector bodies may have funding constraints	Working with commercial partners on strategic sites to support businesses buy in from the outset on sustainable travel outcomes and encourage engagement.
Community Champions	Working with identified community leaders and groups of volunteers to champion and promote sustainable transport use in order to advocate for improved health and wellbeing within their local community.	Engages community with designing and reviewing initiatives and schemes to better tailor them for the people they will serve. Encourages the wider community to think about travel choices and their impact on the environment and health and wellbeing,	Identifying and supporting community champions to support longer term change. Engaging communities and encouraging them effectively to change their behaviour without the requirement to.	Encourage new residents to become Community Champions, will encourage their engagement with existing communities and shape their new communities.
Business Engagement	Development of a tailored programme of travel support to engage with large trip generating employers and sites, to deliver sustainable travel orientated measures, alongside the regular monitoring of employee travel behaviour.	Working with the largest employee trip generators will enable a large proportion of the mode share to be targeted with tailored, specific measures. Monitoring employee travel patterns will enable continuous development and tailoring of initiatives as patterns evolve.	Encouraging employers to get on board with the scheme if they do not perceive problems with existing travel patterns. Collecting employee travel data can be resource heavy and take time to collate but it is essential to achieve a 'full picture' to development the most effective schemes and initiatives.	Targeting of new commuter journeys from strategic sites, understanding where people commute to and what their commuting trips look like. Shaping commuter trips is essential from the outset of strategic development residency, as the provisions for sustainable community should already be in place.
Marketing and Communications	Development of a marketing and communications plan to sell the HGGT Modal Transition vision to the target groups with the highest propensity to change. This can be done through an in-house appointment or through a specialist consultancy.	By targeting those who have the highest propensity to change their travel behaviour, initial engagement and communications can be most effective with less resourcing. It can then be dialled up based on requirements, such as strategic sites development.	Effectively targeting those with a lower propensity to change. Creating effective marketing and communications strategies that will achieve the desired level of impact and effectiveness.	Dial up marketing and communication strategy during the final stages of strategic sites development, to target new residents and encourage sustainable transport decisions from the outset.
Residential Travel Support	Working with developers to promote sustainable travel, ensuring residential travel plans are in place to reduce the number of car journeys new developments will create and sustainable modes of transport usage is maximised.	Encourages residents of new developments to use sustainable travel through awareness and clear presentation on the availability and suitability of sustainable modes for different trip types. Offers a point of call for understanding of sustainable modes available to those who may be new to the area.	Development of a strategy of comprehensive support for new residents. Creating services and mobility options that match the ambition of complete sustainable mobility options for residents of new developments.	All strategic sites should have a residential travel plan or relevant support in place to encourage and enable residents to utilise sustainable travel options for their trips, reducing the attractiveness of car trips.

7.5.3 Local Impact

This summary table sets out the local impact analysis of parts of the target engagement programme theme. Across each programme or scheme a number of key determinants are described, including what are the linked HGGT infrastructure elements that are already planned or under development, what key demographics will they impact, what is the spatial influence across different geographies, what is the likely share of movement trips and type that are impacts and finally, the likely scale of impact.

	School Travel Scheme	Pathfinder Businesses and Institutions	Community Champions	Business Engagement	Marketing and Communications	Residential Travel Support
Linked HGGT Infrastructure Elements	• Cycling and Walking routes via schools • LCWIP Routes	• Cycling and Walking routes via schools • LCWIP Route	To be utilised to help co-design new infrastructure and help embed and activate STC's	• Radial Bus • Radial Cycling	To be determined in the marketing and communications plan but likely to help activate awareness/ encourage use of all new infrastructure	• All STCs • Strategic developments and associated Mobility Hubs
Key Demographics	Families and school age children / young adults	Employees and Business owners	Families living in high traffic streets	Employees and Business owners	Young people, Working age adults and Seniors	Future residents of new strategic developments
Key HGGT Geography	• Four strategic developments • Liveable streets	• Pinnacles • Templefields • Town centre • Key institutions	Area wide with particular focus on liveable streets	• Pinnacles • Templefields • Town centre	To be determined in the marketing and communications plan	All strategic sites
Share of HGGT area trips impacted by intervention	10-15%	5-10%	2-5%	5-10%	5-10%	5-10%
Scale of Impacts	High	Medium	Medium	High	High	High

Table 26: Summary of local impact of targeted engagement components

7.5.4 Delivery and Funding

This table summarises the elements of delivery and funding critical to the different components. It gives high level information regarding the source of funding, the type of funding and scale required, and indicative package costs, who is likely to lead on delivery of the scheme or programme and what is the role of HGGT in the delivery.

Component	Source of Funding	Type of Funding			Indicative Package Cost (and how)	Proposed Delivery Organisation	Role of HGGT
		Resource	Capital	Revenue			
School Travel Scheme	DfT HGGT core budget RIF	£	-	£	£150,000-£200,000 per annum (dependent on scale/ number of schools worked with)	HGGT Essex Harlow	Recruit officer Liaise with schools to understand current provision of support and barriers to sustainable mobility
Pathfinder Businesses and Institutions	DfT HGGT core budget RIF	££	-	£	£25,000-£50,000 (dependent on scale/ number of businesses worked with)	HGGT Essex Harlow	Recruit officer Create network of businesses
Community Champions	DfT HGGT core budget RIF	£	-	£	£25,000-£50,000 (dependent on scale/ number of community champions worked with)	HGGT Essex Harlow	Recruit volunteers Create network of communities
Business Engagement	DfT HGGT core budget RIF	£	-	£	£150,000-£200,000 per annum (dependent on scale/ number of businesses worked with)	HGGT Essex Harlow	Develop tailored travel support Engage with large trip generating employers
Marketing and Comms Plan	DfT HGGT core budget RIF	£	-	£	£50,000 - £75,000 for initial development of plan (dependent on if initial plan is outsourced to a consultancy or delivered in house) Circa up to £250,000 per annum for delivery of plan- (to include e.g. out of home costs for marketing, paid for social media, and other elements to be determined within the plan).	HGGT	Develop plan for implementation that will sell HGGT vision Determine appropriate channels and social media platforms
Residential Travel Support	S106 – Developer funding	£££	-	£	£50,000-£100,000 per annum (dependent on scale/ number of strategic sites worked with)	HGGT Essex Harlow Developers	Engage developers Appoint resource

Table 27:Summary of delivery and funding considerations for targeted engagement components

Key:
£ - Low - ££ - Medium - £££ - High

Indicative Programme Cost

Arup has produced a high level indicative range of costs for the identified programmes, interventions and schemes. These are based on similar schemes developed for other local authorities, but for most costs there are significant scalability opportunities and challenges depending on the level of ambition and the exact proposal is taken forward. This would be confirmed through the development stage. Optimism bias has not currently been applied and all schemes are costed at current prices, with forecasts to 2050 made based on current prices, not accounting for varying levels of inflation. If schemes are delivered later or completed earlier this would also impact costs. The purpose of the costing is providing high level comparison of themes, not development of future budgets. Where development costs are identified, some could be delivered through internal resource if capacity and capability available.

	Low Estimate	High Estimate
Capital Cost		
Revenue Cost	£10,300,000	£12,850,000
Development Costs	£200,000	£250,000

Table 28: Indicative HGGT area-wide programme costs for targeted engagement programmes

7.5.5 Component Summary

This summary table sets out, for the targeted engagement programme theme, the identified prioritisation for each programme or scheme, the likely delivery timeframes, the potential impact range of modal shift and key actions to be taken for each identified programme.

The prioritised components, including a breakdown of key tasks, allocated to a detailed annual programme, with greater short-term (to 2025) granularity is provided overleaf in Table 30.

Intervention	Short term Priority	Timeframes (estimates)	Potential Impact Range	Key Action
School Travel Scheme	Recruitment of a dedicated school engagement officer to liaise with schools on supporting modal transition and working with them to ensure all schools have a travel plan in place.	Short-term Liaising with schools – 3 months Development of a tailored travel planning education programme - 2 months Working with schools on delivery of site-specific travel plans and regular monitoring of student travel behaviour - ongoing	High	Liaising with schools to determine existing situation and development of a tailored travel planning education strategy to support school travel plan delivery once an officer has been recruited.
Pathfinder Businesses and Institutions	Recruitment of a dedicated businesses engagement officer to develop a business engagement strategy and feedback views from businesses.	Short-term Recruitment of officer – 3 months Engagement with businesses - ongoing	Medium	Recruitment of dedicated officer to develop comms channel and understand which businesses are interested in taking forward meaningful action.
Community Champions	Recruit network of community volunteers to engage with their communities and promote sustainable travel for their health and wellbeing.	Short-term Recruiting volunteers – 6 months Utilising Community Champions – 12 months	Low	Recruiting Community Champions to engage with community and feedback to HGGT.
Business Engagement	Develop a programme of tailored travel support for the biggest trip generating businesses, alongside engaging with new and potential businesses to support sustainable trips from the outset.	Short-term Programme development – 2 months Programme delivery and tracking of initiatives across businesses that can monitor uptake of sustainable travel - ongoing	Medium	Development of a programme of site-specific travel action plans with businesses, engagement with businesses to undertake regular monitoring of employee travel behaviour and framework for engaging with new businesses.
Marketing and Comms	Develop marketing and communication plan to sell HGGT vision of sustainable mobility, implement plan targeting those with high propensity to change.	Medium-term Develop marketing and communications plan and potential appointment of external resource support – 3 months Implementation of plan and subsequent management – ongoing	Medium	Assess options for social media and communication campaigns and develop plan for targeted campaigns to sell HGGT vision.
Residential Travel Support	Working with developers to promote sustainable travel, ensuring residential travel plans are in place to reduce the number of car journeys new developments will create and sustainable modes of transport usage is maximised.	Long-term Engage with developers on promotion of sustainable travel and development of travel plans – 3 months Development of travel plans for strategic sites – 6 months	High	Engage with developers and develop plans for sustainable travel from strategic sites to key destinations.

Table 29: Component summary table for targeted engagement programmes

7.5.6 Theme Prioritisation and Timeframes (short-term focus)

	2023	2024	2025	2026	2027	2028	2029/30	2031/32	2033/34	2035-40	Scenario Priority		
											BAU	Ambition	Exemplar
1. School Travel Scheme *1.1 Recruit a dedicated schools engagement officer. Liaise with schools to understand current provisions of travel support and barriers to using sustainable travel* ***Output: Improved safety around the school, reduced congestion and safer walking and cycling routes*** *1.2 Develop a tailored travel planning education that will deliver initiatives to increase sustainable travel use* ***Output: Bespoke programme of measures to be delivered with schools*** *1.3 Deliver the programme, including development of site-specific travel action plans with schools, working with them to help deliver the actions and undertake regular monitoring of student travel behaviour* ***Output: Tracking of initiatives across schools that can monitor uptake of sustainable transport***													
2. Pathfinder Businesses and Institutions *2.1 Recruit a dedicated business engagement officer who will create a network of businesses in the area, simplifying channels of engagement from local authority and act as a soundboard for businesses on travel and transport issues* ***Output: Engaged cohort of businesses is formed who are interested in taking forward meaningful action on sustainable transport***													
3. Community Champions *3.1 Recruit a network of volunteers to champion and promote sustainable transport use to help improve health and wellbeing in the local community* ***Output: People who use their social networks and life experience to address barriers to engagement and improve connections between public authorities and their communities*** *3.2 Utilise the community champion network as a key group in the co- design of sustainable transport initiatives and scheme delivery and design* ***Output: Network will ensure community buy in and resistance to sustainable transport measures are mitigated***													
4. Business Engagement *4.1 Develop a programme of tailored travel support, developed to engage with large trip generating employers and sites to deliver sustainable travel orientated measures* ***Output: Working with the largest trip generators will have the biggest impact on overall mode share targets*** *4.2 Deliver the programme, including site specific travel action plans with businesses, working with them to help deliver the actions and undertake regular monitoring of employee travel behaviour* ***Output: Tracking of initiatives across businesses that can monitor uptake of sustainable transport***													
5. Marketing and Comms Plan *5.1 Develop a marketing and communications plan that will sell the vision of HGGT modal transition and target groups with the highest propensity to change (resource to be determined in-house or appoint specialist consultancy)* ***Output: Targeted marketing to sell the vision and targeted communication to activate change*** *5.2 Start to implement marketing and communications plan (to include social media campaigns and other comms channels as determined in the plan)* ***Output: Marketing and Comms that can start to be dialled up in the lead up to strategic site development***													

Table 30: Prioritised targeted engagement programmes and timeframes for delivery (short term focus)

7.5.7 Theme Prioritisation and Timeframes (long-term focus)

Whilst Table 26 on the previous page gives a more detailed breakdown of the short-term priorities up until the end of 2025, this section expands to the 2040 future year and sets out the longer-term priorities. This is demonstrated in Table 31 below.

	2023	2024	2025	2026	2027	2028	2029/30	2031/32	2033/34	2035-40	BAU	Ambition	Exemplar
School Travel Scheme													
Pathfinder Businesses and Institutions													
Community Champions													
Business Engagement													
Marketing and Comms													
Residential Travel Support													

Table 31: Prioritised targeted engagement programmes and timeframes for delivery (long term focus)

Short term priority

Development

- Develop strategies to engage with schools and businesses to understand current provision of sustainable travel support and barriers to uptake.
- Engage with local communities on proposals and HGGT vision.

Delivery

- Recruit dedicated officers to engage with schools, businesses and institutions. Work with schools and businesses to develop tailored, site-specific travel plans.

Medium term priority

Development

- Creation of community and business networks, simplifying engagement channels and recruiting volunteers to champion sustainable transport.

Delivery

- Deliver sustainable transport schemes incorporating views from targeted engagement and monitor school and business travel behaviour to evaluate impact.

Long term priority

Development

- Understanding the needs of the new residents of strategic developments
- Liaising with developers on provisions of mobility to enable sustainable travel.

Delivery

- Provide comprehensive travel support through plans for new residents of strategic sites, supported through the development of sustainable mobility options in the area

7.5.8 Benefits and Evidence

This section sets out the wider benefits that can be achieved (linked to the benefits map) through the delivery of the components that make up the targeted engagement programme theme. It also demonstrates case studies of where similar has been developed and examples of how this could happen in the HGGT area and some outcomes that could be realised.

Wider Benefits

- Engagement with the community ensures everyone can have an opinion
- Involving communities through a collaborative design approach is essential for delivering successful schemes
- Overcomes resistance to change and uncertainty
- Increased community pride and a sense of ownership
- More responsive and tailored transport system

Where has it been adopted

- **Case study 1 – Bristol Travel West:** Active Travel Champions project where the purpose is to get more people walking or cycling to work through peer lead support. Currently has over 250 Champions in a range of businesses, from the region's largest to smaller businesses.
- **Case study 2 – Mode shift STARS:** Centre of Excellence for the delivery of effective travel plans in education, business and residential settings. The scheme recognises organisations that have shown excellence in supporting active and sustainable forms of travel.

Example 1 - Raising Awareness for Active Travel

Awareness of the range of active travel options and infrastructure improvements to cycle routes and school streets has increased.

Now a variety of sustainable modes are used for different trip types, with a car used as a last resort for some trips that can't be completed through active travel or public transport.

Example 2 - Travelling to Work and School

Companies are driven to achieve recognition for the quality of their travel plans and the impact they have had on employee commuting patterns.

Schools are focusing on reducing pupil drop-offs by car which is managed by the implementation of school streets and reduced traffic at these times making alternative modes safer and more attractive.

7.6 Rebalancing the Cost of Travel

7.6.1 Introduction

What is the baseline situation?

Currently driving is not only significantly quicker for many journeys within the HGGT area it's also cheaper than public transport for most journeys especially where free or cheap parking is offered at workplaces or destinations. Employers are also not currently incentivised to promote active and public transport for employment over commuting by car with high levels of parking at many workplaces.

Why does it support the Vision for the HGGT area?

Pricing measures are not the preferred vision for delivering modal transition however pricing remains a key tool in many areas to deliver transition from high car dependency. However, an approach to reviewing the comparable cost of travel could provide an incentive for easily switchable trips to be undertaken by sustainable modes and can provide revenue which supports public and active transport measures. Ensuring economic growth and investment in town centres will be a vital consideration as part of this package of measures.

What will it achieve?

When the requisite alternatives to private transport are in place, the modal transition to public transport should be on a positive path.

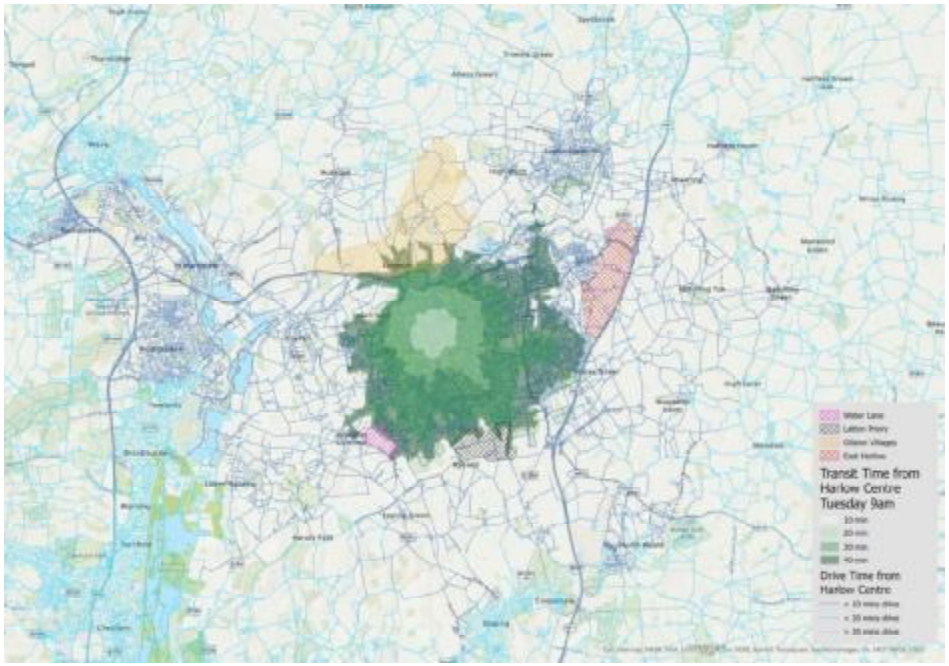


Figure 26: Car vs Public Transport Accessibility

7.6.2 Component Description

This summary table sets out the component parts of the rebalancing the cost of travel theme. It establishes which individual programmes or schemes are included within the theme, a description of what it entails, its likely influence on modal choice for users, some of the key challenges to deliverability or the scope of influence on modes and how it may be interpreted differently for the strategic sites.

Component	What is it?	How does it influence modal shift?	Key challenges	Strategic Sites
Parking Management Strategy	Reviewing the price of public and on street parking.	Alongside reviewing supply (see roads streets and neighbourhoods) the cost of parking can influence modal choice of users.	Public parking represents only a small share of total parking and retail, and employment parking is outside of the town centre and direct public control.	N/A
Strategic Sites Parking Management Strategy	Ensuring the pricing of parking in strategic sites encourages sustainable travel including costs of parking permits.	Ensuring that new sites are developed with coherent parking pricing strategy that ensures short trips are undertaken by sustainable modes.	Developers will need balance the needs of parking and ensure development are attractive to residents.	Will set out a pricing strategy for strategic site parking including on-street and public parking.

Table 32: Description of rebalancing the cost of travel components

7.6.3 Local Impact

This summary table sets out the local impact analysis of parts of the rebalancing the cost of travel theme. Across each programme or scheme a number of key determinants are described, including what are the linked HGGT infrastructure elements that are already planned or under development, what key demographics will they impact, what is the spatial influence across different geographies, what is the likely share of movement trips and type that are impacts and finally, the likely scale of impact.

	Parking Management Strategy	Strategic Sites Parking Management Strategy
Linked Infrastructure Elements	All	All
Key Demographics	Car owners and visitors	All car
Key HGGT Geography	Car owning households and businesses	Car owning households and businesses
Share of Trips Impacted	Around half of all trips end in Harlow	15% of Harlow in new developments
Scale of Impacts	Medium	Medium

Table 33: Summary of local impact of rebalancing the cost of travel components

7.6.4 Delivery and Funding

This table summarises the elements of delivery and funding critical to the different components. It gives high level information regarding the source of funding, the type of funding and scale required, and indicative package costs, who is likely to lead on delivery of the scheme or programme and what is the role of HGGT in the delivery.

Component	Source of Funding	Type of Funding			Indicative Package Cost (and how)	Proposed Delivery Organisation	Role of HGGT
		Resource	Capital	Revenue			
Parking Management Strategy	Revenue Positive	£££	£	Potentially revenue positive	Policy development of £25k, consultation costs of £20k, implementation cost vary	Harlow Council	Deliver in collaboration with Harlow Council
Strategic Sites Parking Management Strategy	Developer Funding	££		Potentially revenue positive	Initial Policy development of £25k, consultation cost of £20k, implementation cost vary	HGGT	Work with developers on proposals

Table 34: Summary of delivery and funding considerations for rebalancing the cost of travel components

Key:
£ - Low
££ - Medium
£££ - High

Indicative Programme Cost

Arup has produced a high-level indicative range of costs for the identified programmes, interventions and schemes. These are based on similar schemes developed for other local authorities, but for most costs there are significant scalability opportunities and challenges depending on the level of ambition and the exact proposal is taken forward. This would be confirmed through the development stage. Optimism bias has not currently been applied and all schemes are costed at current prices, with forecasts to 2050 made based on current prices, not accounting for varying levels of inflation.

If schemes are delivered later or completed earlier this would also impact costs. The purpose of the costing is providing high level comparison of themes, not development of future budgets. Where development costs are identified, some could be delivered through internal resource if capacity and capability available. For rebalancing the cost of travel only development costs have been identified as many schemes could be developed on a cost neutral or profit-making basis, depending on the assumptions and development route of the different options. Revenue could then be used to fund other interventions.

	Low Estimate	High Estimate
Capital Cost	n/a	n/a
Revenue Cost	n/a	n/a
Development Costs	£200,000	£300,000

Table 35: Indicative HGGT area-wide programme costs for rebalancing the cost of travel

7.6.5 Component Summary

This summary table sets out, for the rebalancing the cost of travel theme, the identified prioritisation for each programme or scheme, the likely delivery timeframes, the potential impact range of modal shift and key actions to be taken for each identified programme.

The prioritised components, including a breakdown of key tasks, allocated to a detailed annual programme, with greater short-term (to 2025) granularity is provided overleaf in Table 37.

Intervention	Short term Priority	Timeframes	Potential Impact Range	Key Action
Parking Management Strategy	High	Short-term • Develop strategy • Manage parking provision in key areas	1-5%	Develop a proposal for a comprehensive review of parking management and pricing in conjunction with the Town Centre Strategy. Ensure this is balanced against the economic vitality of the town, but with an aim to promote more journeys by public and active travel.
Strategic Sites Parking Management Strategy	High	Medium-term • Develop strategy and engage with developers	1-5%	Begin engagement with developers and Local Government on proposed parking provision, permitting and pricing proposals.

Table 36: Component summary table for rebalancing the cost of travel engagement programmes

7.6.6 Prioritisation and Timeframes (short-term focus)

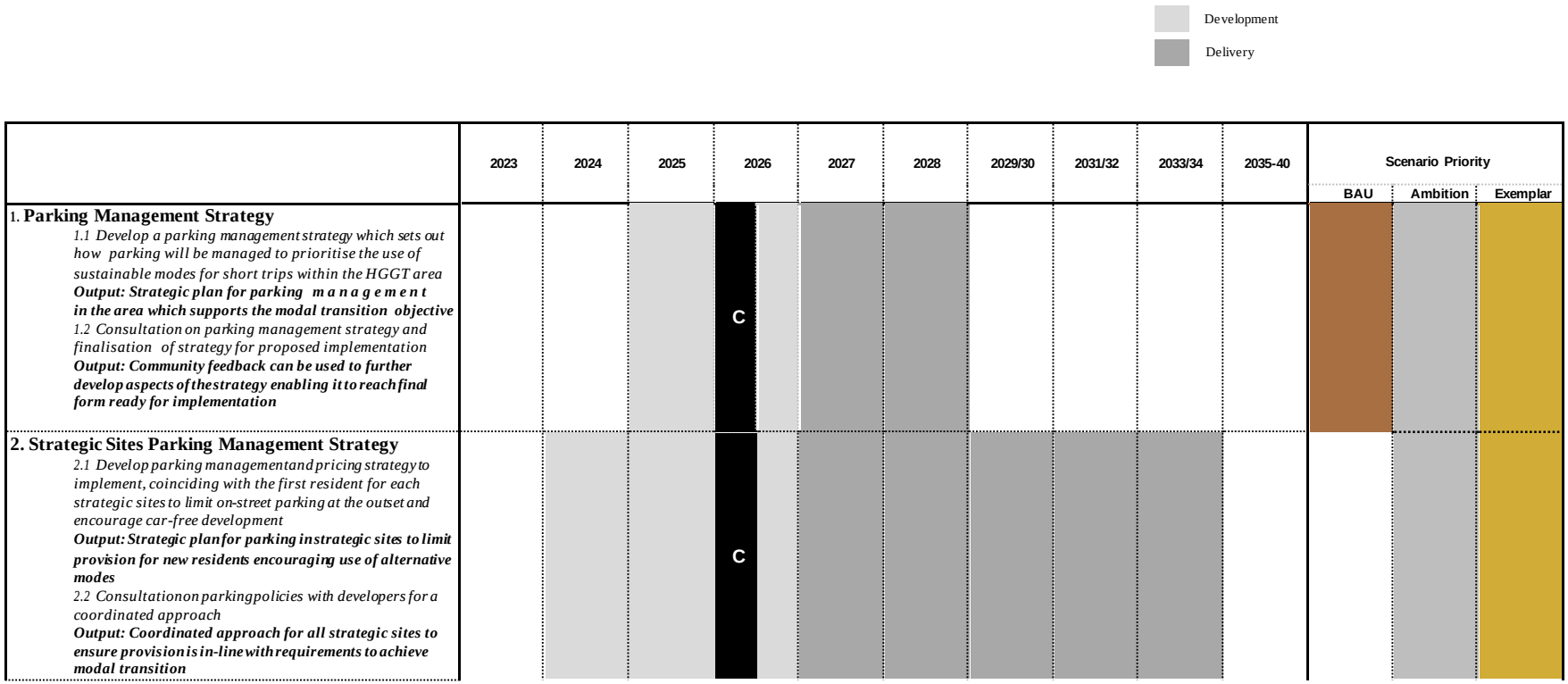


Table 37: Prioritised rebalancing the cost of travel programmes and timeframes for delivery (short term focus)

C Consultation

7.6.7 Prioritisation and Timeframes (long-term focus)

Whilst Table 37 on the previous page gives a more detailed breakdown of the short-term priorities up until the end of 2025, this section expands to the 2040 future year and sets out the longer-term priorities. This is demonstrated in Table 38 below.

Table 38: Prioritised rebalancing the cost of travel programmes and timeframes for delivery (long term focus)

	2023	2024	2025	2026	2027	2028	2029/30	2031/32	2033/34	2035-40	Scenario Priority		
											BAU	Ambition	Exemplar
Parking Pricing Strategy													
Strategic Sites Parking Policies													

Short term priority

Development

- Develop strategy for town centre parking and reducing provision to maximise impact on increasing sustainable mode trips.
- Develop strategy based on examples presented for new developments to mitigate unnecessary private car ownership for strategic developments.
- Consult with developers on suitability of strategy.

Delivery

- Once developers have been consulted, incorporate strategy into proposals for strategic sites.
  Once consultations for pricing and provision of parking in the town centre, incorporate into relevant council strategy or policy.

Medium term priority

Development

- Utilise strategies to encourage car free residents. Develop public transport and sustainable mode options alongside to ensure mobility is not negatively affected.

Delivery

- Ensure strategic sites are delivered alongside relevant parking policies and parking provision is delivered by stakeholders in line with policies.

Long term priority

Development

- Develop strategy in line with potential national policy which may be in place in the future.

Delivery

- Deliver strategy with partner councils to ensure strategy is area wide.

7.6.8 Benefits and Evidence

This section sets out the wider benefits that can be achieved (linked to the benefits map) through the delivery of the components that make up the rebalancing the cost of travel theme. It also demonstrates case studies of where similar has been developed and examples of how this could happen in the HGGT area and some outcomes that could be realised.

Wider Benefit

- Supports affordable and inclusive access to employment opportunities and services.
- Improving social equity, economic opportunities for residents
- Balancing accessibility for all socio-economic groups and reductions in both emissions and congestion which benefit many communities.
- Funding from government can support residents transition to cleaner vehicles alongside funding sustainable transport interventions.

Where has it been adopted

- **Case Study 1 – Nottingham Workplace Parking Levy:** All employers providing parking spaces are legally obliged to licence the spaces and may be liable to pay. Employers may choose to reclaim this payment from their employees. This has led to a decrease in workplace parking space provision in the city.
- **Case Study 2 – Lambeth Kerbside Strategy:** Sets out the council's vision to reclaim the kerbside as a public space. Currently, 94% of kerbside space is used as parking provision and the plan is to transform 25% of kerbside space into places for people such as cycle storage, parklets and other spaces for community use.

Example - Parking Permits and Reducing Traffic

The new developments in the HGGT area have controls on parking permits which means that most households have a single vehicle. This has meant that whilst Harlow's population has grown by 15% the overall level of traffic remains at 2022 levels.

The lack of high levels of parking provision has meant the new developments will be supporting increased public transport use on the STCs and turn-up-and-go service levels which benefit the town.

7.7 Sustainable Freight and Deliveries

7.7.1 Introduction

What is the baseline situation?

Currently, there are a range of local convenience stores offering parcel pick-up and drop-off for a range of couriers. There is little coordination for freight and deliveries and the traffic created can make walking and cycling less attractive. This is in line with the national context, where freight and deliveries is road centric.

Why does it support the Vision for the HGGT area?

Whilst freight and delivery trips are not part of the mode share calculations reducing the total trips and improving the way freight and deliveries are conducted would make the HGGT area a more attractive place to travel by active and public transport. This in turn allows for more reliable operation of the road network for the movement of freight to support logistics, distribution and service sector companies based in the area, which are a large part of the HGGT economy.

What will it achieve?

An exploration into the freight and delivery solutions that can alleviate congestion and provide sustainable last mile deliveries, through sustainable modes and utilisation of mobility hubs as 'service points' for pick-up and drop-off of deliveries.

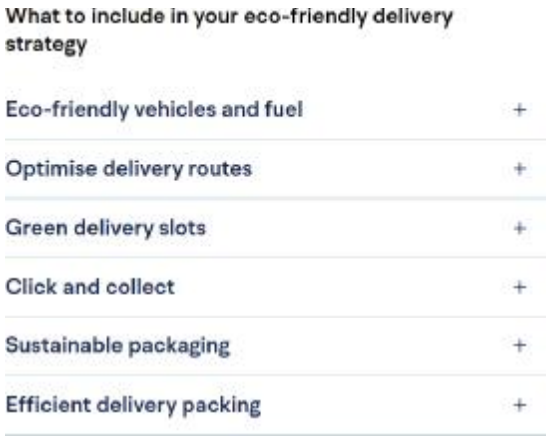


Figure 27: British Business Bank eco-friendly delivery strategy

There are opportunities for low carbon vehicle use, delivery hubs and last mile logistics which use electric vehicles, cargo bikes to deliver goods to local centres or the final destination, especially with the new provision of infrastructure as part of the HGGT area strategic developments.

7.7.2 Component Descriptions

This summary table sets out the component parts of the sustainable freight and deliveries theme. It establishes which individual programmes or schemes are included within the theme, a description of what it entails, its likely influence on modal choice for users, some of the key challenges to deliverability or the scope of influence on modes and how it may be interpreted differently for the strategic sites.

Component	What is it?	How does it influence modal shift?	Key challenges	Strategic Sites
Sustainable Deliveries	Encouraging business to undertake sustainable local deliveries through transition to electric vehicles or suitable modes.	Improve air quality through use of more suitable low impact vehicles or automated deliveries. Incorporating deliveries into mobility hubs can remove the need for last mile deliveries through integration with parcel lockers and pick- up points.	Delivery firms work in a competitive marketplace and will need support to adapt to new vehicles or finical support/incentives.	Opportunity to embed sustainable freight and deliveries into commercial strategic sites. Opportunity to incorporate parcel lockers at mobility hubs within new developments.
Cargo Bike Scheme	Providing support to local businesses to replace delivery vehicles with cargo bikes.	Reduces traffic and improves local air quality through use of carbo bikes instead vehicles.	Cargo bike have been successful in cities where journey times by car are less competitive, and bikes can offer competitive journey times.	Opportunity to embed cargo bike schemes into commercial strategic sites.

Table 39: Description of sustainable freight and deliveries components

7.7.3 Local Impact

This summary table sets out the local impact analysis of parts of the sustainable freight and deliveries theme. Across each programme or scheme a number of key determinants are described, including what are the linked HGGT infrastructure elements that are already planned or under development, what key demographics will they impact, what is the spatial influence across different geographies, what is the likely share of movement trips and type that are impacts and finally, the likely scale of impact.

	Sustainable Deliveries	Cargo Bike Scheme
Linked HGGT Infrastructure Elements	NA	STCs, LCWIP routes
Key Demographics	All	Local businesses
Key HGGT Geography	All	Harlow Town Centre
Share of Harlow trips impacted by intervention	NA	NA
Scale of Impacts	Medium	Medium

Table 40: Summary of local impact of sustainable freight and deliveries components

7.7.4 Delivery and Funding

This table summarises the elements of delivery and funding critical to the different components. It gives high level information regarding the source of funding, the type of funding and scale required, and indicative package costs, who is likely to lead on delivery of the scheme or programme and what is the role of HGGT in the delivery.

Component	Source of Funding	Type of Funding			Indicative Package Cost (and how)	Proposed Delivery Organisation	Role of HGGT
		Resource	Capital	Revenue			
Sustainable Deliveries	Local Authority Funding and Private Sector	££	££	££	Developing a local freight and delivery sustainability programme Costs can be reduced by implementing parcel pick-ups at mobility hubs, as it consolidates deliveries at a key interchange.	HGGT partners to lead on strategy – delivery by private sector providers.	Engage with Harlow and local businesses on potential for the scheme, explore feasibility within Harlow context.
Cargo Bike Scheme	Local Authority funding and Private Sector Government grants Cargo Bike delivery companies	£	-	£	Scheme costs dependent on scale of cargo bike and degree of subsidy. Per bike approx. £1.5k-£4k dependent on powertrain.	HGGT partners to lead on strategy – delivery by private sector providers.	Support Harlow in developing scheme

Table 41: Summary of delivery and funding considerations for sustainable freight and deliveries components

Key:
£ - Low
££ - Medium
£££ - High

7.7.5 Component Summary

This summary table sets out, for the sustainable freight and deliveries theme, the identified prioritisation for each programme or scheme, the likely delivery timeframes, the potential impact range of modal shift and key actions to be taken for each identified programme.

The prioritised components, including a breakdown of key tasks, allocated to a detailed annual programme, with greater short-term (to 2025) granularity is provided overleaf in Table 43.

Intervention	Short term Priority	Timeframes	Potential Impact Range	Key Action
Sustainable Deliveries	Low	**Medium-term** • Evaluate options to shift deliveries towards sustainability	0-1%	Working with businesses to understand how they could be encouraged to deliver sustainable delivering, alongside identifying opportunities to incorporate parcel delivery with mobility hubs.
Cargo Bike Scheme	Low	**Medium-term** • Engage with communities and businesses on appetite to utilise cargo bikes	0-1%	Engaging with Cargo Bike providers to understand costs of Cargo Bike scheme for local businesses. Assess potential opportunities to bid for central government funding to support scheme.

Table 42: Component summary table for sustainable freight and deliveries programmes

7.7.6 Theme Prioritisation and Timeframes (short-term focus)

Development

Delivery

	2023	2024	2025	2026	2027	2028	2029/30	2031/32	2033/34	2035-2040	BAU	Ambition	Exemplar
2. Sustainable Freight Deliveries *2.1 Long term strategy that requires engagement and consultation* ***Output: Engage with businesses as part of targeted engagement programmes to ensure sustainable movement of goods and understand concerns around logistics***						C							
3. Cargo Bike Scheme *3.1 Engage with businesses and communities to understand where opportunities for cargo bike schemes might exist* ***Output: A strategy can be developed following this to provide opportunities to businesses and communities to utilise cargo bikes*** *3.2 Deliver strategy ensuring businesses and individuals are aware of the opportunity* ***Output: Cargo bikes are utilised for existing trips currently done by non-sustainable modes***						C							

Table 43: Prioritised sustainable freight and deliveries programmes and timeframes for delivery (short term focus)

C Consultation

7.7.7 Theme Prioritisation and Timeframes (long-term focus)

Whilst Table 43 on the previous page gives a more detailed breakdown of the short-term priorities up until the end of 2025, this section expands to the 2040 future year and sets out the longer-term priorities. This is demonstrated in Table 44 below.

	2023	2024	2025	2026	2027	2028	2029/30	2031/32	2033/34	2035-40	Scenario Priority		
											BAU	Ambition	Exemplar
Sustainable Freight and Deliveries													
Cargo Bike Scheme													

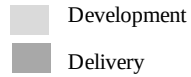


Table 44: Prioritised rebalancing the cost of travel programmes and timeframes for delivery (long term focus)

Short term priority

Development

- Develop strategy for future of freight in HGGT area.
- Present strategy and engage on feedback for further development.
- Consult with local businesses and logistics providers on suitability of strategy.
- Develop framework for cargo bike schemes.

Delivery

- Once businesses and logistics providers have been consulted incorporate strategy into proposals for strategic sites and wider HGGT proposals.

Medium term priority

Development

- Assess viability of new freight and delivery technologies, example case studies utilised in scenarios that align with concerns around deliveries and logistics experienced in Harlow.
- Engage with opportunities to source funding such as government grants or private sector subsidies.
- Assess feasibility and appetite for local businesses using cargo bikes.

Delivery

- Deliver applications for funding where relevant.
- Framework for delivering sustainable freight infrastructure.

Long term priority

Development

- Understand the needs of sustainable freight in the current (future) scenario and develop intervention proposals in line with this.
- Develop strategy in line with potential national policy which may be in place in the future.

Delivery

- Deliver required infrastructure for improving the sustainability of freight, logistics and deliveries within the HGGT area, alongside required policies and alignment with government policy.

7.7.8 Benefits and Evidence

This section sets out the wider benefits that can be achieved (linked to the benefits map) through the delivery of the components that make up the sustainable freight and deliveries theme. It also demonstrates case studies of where similar has been developed and examples of how this could happen in the HGGT area and some outcomes that could be realised. Although the case studies are at a relatively infant stage, they reflect the current situation and are expected to be developed into fully worked up schemes by the time we propose HGGT develops similar schemes.

Wider Benefits

- Reduced congestion from delivery vehicles
- Optimised public transport routes, first and last mile solutions
- Improved sustainability of wider supply chain
- Improved efficiency for delivery companies
- Integration with other trip types, reducing unnecessary trips

Where has it been adopted

- **Case study 1 – Farr Out, Edinburgh:** Cargo Cycle company providing first/last mile same-day deliveries, stock holding and delivery fulfilment across Edinburgh.
- **Case study 2 – Autonomous Delivery Robots, Milton Keynes:** Food and grocery delivery from a range of merchants in the city are delivered by autonomous, electric robots.

Example 1 - Convenient and Sustainable Home Deliveries

Residents can choose a green delivery slot, which groups orders together by location. This is attractive as they can be priced cheaper and benefit the environment.

Residents can choose to collect deliveries from a local hub parcels can be collected from different couriers from one place saving time and money for both residents and delivery companies.

Example 2 – Future of Deliveries

Sustainable first and last-mile deliveries are a lot more commonplace in the area now. Autonomous delivery robots are also seen bringing people's groceries to their door.

There has been a huge reduction in the number of trips by private car because of the impacts of these new approaches to delivery, alleviating congestion and giving people more free time.

8. Scenarios

8.1 Introduction

Three scenarios have been developed to provide an indication of potential pathways to achieving the HGGT modal transition objectives.

The following sub-sections include further details on each scenario, applied to both the HGGT area itself and strategic sites.

Scenario	Falling behind achieving the objectives for HGGT (BAU)	Trailing the target timeframes but progressing towards the objectives for HGGT (Ambition)	On track to achieve the objectives for HGGT (Exemplar)
Summary	No significant changes beyond committed infrastructure and developer funding for new infrastructure and only a small behavioural change programme in place.	Delivery of some targeted interventions has been achieved, however more controversial and higher cost schemes not delivered.	Difficult decisions regarding the delivery of more controversial and higher cost schemes have been made which reinforces growth in active and public transport through improved services and land use change.

8.2 Exemplar: Harlow

In this scenario, the mode share objective for the HGGT area is achieved by 2035 and overall vehicle trips across HGGT are below today's level, ensuring traffic and congestion levels do not increase.

Using available resources, HGGT successfully delivers interventions that contribute to the modal transition in the short term and in response to this approach, the HGGT area continues to receive significant funding from Local and Central Government to deliver further improvements.

The timely delivery of interventions such as STCs and improved public transport increases public support for further interventions are combined with locally implemented mechanisms which support the ongoing cost of public transport. The HGGT area's roads become less congested, which in turn enables the re- prioritisation of road space in the high streets and town centre to develop and supporting active transport. Lower traffic and greater bus priority supports the bus networks performance and makes the HGGT area a more attractive place to walk and cycle.

Working from home has a sustained impact on how often people choose to commute and local travel increases substantially, typically by walking or cycling. E-bikes are particularly popular for travel to mobility hubs over middle distances combined with an improved bus network supported by DRT in lower density areas.

Trip type	Walk	Cycle	Rail / Bus	Car	Car passenger
Commuting and business	▲	▲	▲	▼	▼
Education or education escort	▲	▲	▲	▼	▼
Shopping and leisure	▲	▲	▲	▼	▼

Minor change ▲ ▲ ▲ Major change

Table 45: Indicative modal transition impact by trip type (Exemplar: Harlow)

By 2040:

10,389 additional total daily trips

52,472 additional daily trips by active and sustainable modes

42,083 fewer daily trips by car modes

27% increase in active and sustainable mode share

8.3 Exemplar: Strategic Sites

In this scenario, the mode share objective for the strategic sites is achieved by 2035.

The strategic sites are designed in such a way that supports high active and public transport travel for all trip types, growing the active and sustainable mode share quickly from 15% to 47% to 2030. The modal transition is further advanced up to 2035 due mostly to implementation of parking policies which discourage short vehicle trips and high-quality walking and cycling routes.

Initially lower rates of public transport take up are seen as service levels builds as demand increases. Developments are attractive to new and existing residents partially because of the sustainable lifestyle they deliver for residents.

Short trips are concentrated on walking and cycling, this includes access to schools, retail and local leisure facilities. Cycling occurs along dedicated cycle routes and local streets and safe storage is provided at key locations.

For journeys into Harlow and onwards, many residents use the high-quality turn up and go local bus provision utilising the STCs or an expanded DRT to get to the town centre and for regional connections via the train or bus station.

Trip type	Walk	Cycle	Rail / Bus	Car	Car passenger
Commuting and business	▲	▲	▲	▼	▼
Education or education escort	▲	▲	▲	▼	▼
Shopping and leisure	▲	▲	▲	▼	▼

Minor change ▲ ▲ ▼ Major change

Table 46: Indicative modal transition impact by trip type (Exemplar: Strategic Sites)

8.4 Ambition: Harlow

In this scenario, the mode share objective for the HGGT area is on track to be achieved by the late 2040s.

Using available resources HGGT successfully delivers some targeted interventions that translate to a modest transition to active and sustainable modes in the short term. This places some pressure on HGGT to invest in interventions that will result in a step change between required after 2035.

In the short-term, the focused implementation of Healthy School Streets and School Travel Programmes result in behaviour change from car to walk, cycle and bus for education and education escort trips.

Investment in active travel interventions in the medium-term such as cycle hire schemes, E-bike schemes and cycle storage infrastructure increases the share of active travel for the broader HGGT area population including longer commuting trips.

The joined-up thinking demonstrated by HGGT partners in terms of their plan to increase bus patronage is recognised by Central Government and some funding is received for bus service improvements. This increases the public transport mode share in the HGGT area, but cars are still dominant trips of a medium length.

Trip type	Walk	Cycle	Rail / Bus	Car	Car passenger
Commuting and business	▲	▲	▲	▼	▼
Education or education escort	▲	▲	▲	▼	▼
Shopping and leisure	▲	▲	▲	▼	▼

Minor change Major change

Table 47: Indicative modal transition impact by trip type (Ambition: Harlow)

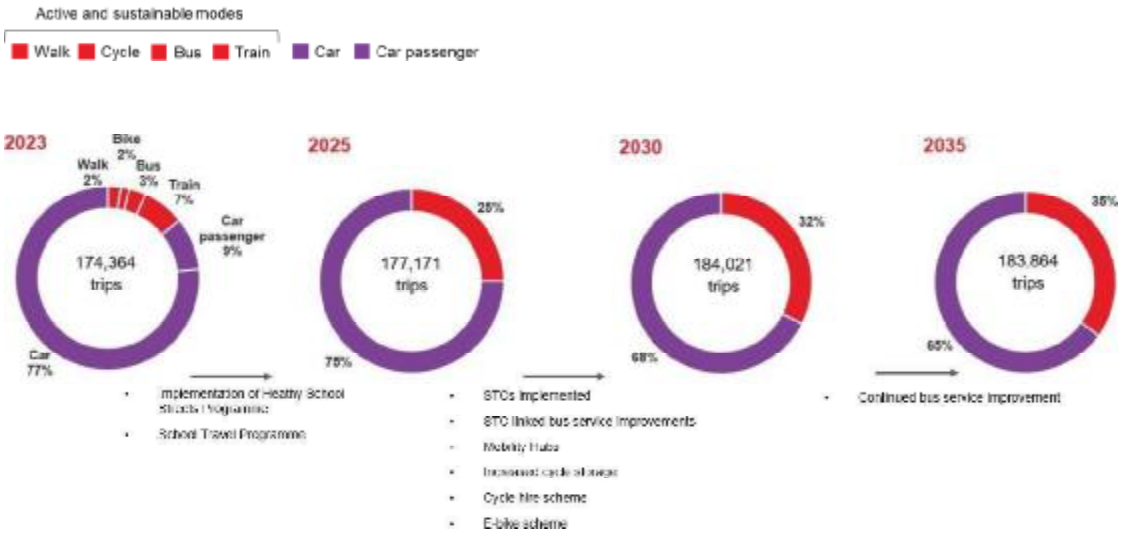
By 2040:

10,389 additional total daily trips

52,273 additional daily trips by active and sustainable modes

41,884 fewer daily trips by car modes

27% increase in active and sustainable mode share



8.5 Ambition: Strategic Sites

In this scenario, the mode share objective for the strategic sites is achieved by 2040.

The strategic sites are designed in such a way that supports high active and public transport travel for all trip types, growing the active and sustainable mode share quickly from 15% to 45% to 2030. A steadier transition is observed in the years from 2030 as residents have their established travel patterns, so investment in further infrastructure provision or behaviour change programmes is required to be very effective and targeted.

Short trips are concentrated on walking and cycling, this includes access to schools, retail and local leisure. Cycling occurs along dedicated cycle routes and safe storage is provided at key locations.

For journeys into Harlow and onwards, many residents use the local bus provision utilising the STC to get to the town centre and for connections to the train station.

Trip type	Walk	Cycle	Rail / Bus	Car	Car passenger
Commuting and business	▲	▲	▲	▼	▼
Education or education escort	▲	▲	▲	▼	▼
Shopping and leisure	▲	▲	▲	▼	▼

Minor change Major change

Table 48: Indicative modal transition impact by trip type (Ambition: Strategic Sites)

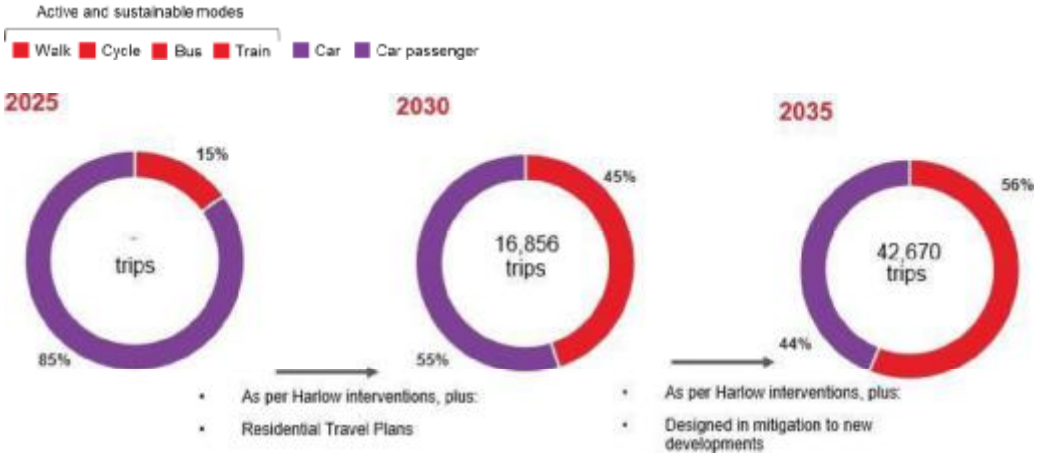
By 2040:

68,320 additional total daily trips

40,992 additional daily trips by active and sustainable modes

27,328 additional daily trips by car modes

60% active and sustainable mode share



8.6 Business as Usual: Harlow

In this scenario, the mode share objective for the HGGT area is possibly achieved by the 2040s but progress in the initial years is slow which delays government funding.

In the short-term, HGGT deliver the committed infrastructure projects and implement a small behavioural change programme. Investment beyond this is difficult to secure and as a result the modal transition is only marginal to 2035.

Vehicle ownership grows and there are few disincentives put in place to reduction vehicle travel to the town centre. Bus use has increased but most services are not viable at turn up and go frequencies and are impacted by unreliable journey times when not operating on the STCs. Workplaces are still dominated by car commuting due to high levels of free workplace parking.

Levels of physical activity and impacts from local air quality continue to impact the health of local residents through the 2030s. With car dependency high, low-income residents are forced to spend a high share of income on transport costs.

Trip type	Walk	Cycle	Rail / Bus	Car	Car passenger
Commuting and business	▲	▲	▲	▼	▼
Education or education escort	▲	▲	▲	▼	▼
Shopping and leisure	▲	▲	▲	▼	▼

Minor change Major change

Table 49: Indicative modal transition impact by trip type (BAU: Harlow)

By 2040s:

10,389 additional total daily trips

52,273 additional daily trips by active and sustainable modes

41,884 fewer daily trips by car modes

27% increase in active and sustainable mode share

8.7 Business as Usual: Strategic Sites

In this scenario, there is low confidence that the mode share objective for the strategic sites is achieved (if at all) by the 2040s and progress towards the target is slow.

Without the improvements coming from the wider HGGT area, achieving the mode transition objective, it remains a challenge to those working locally who are reliant on low frequency buses and congestion, making walking and cycling less attractive.

Local trips in the villages remain car dominated and streets hostile to walking and cycling due to high levels of traffic.

People moving to the Strategic Sites are seeking the suburban lifestyle and as a result resist transitioning from car travel for the majority of trip types.

Trip type	Walk	Cycle	Rail / Bus	Car	Car passenger
Commuting and business	▲	▲	▲	▼	▼
Education or education escort	▲	▲	▲	▼	▼
Shopping and leisure	▲	▲	▲	▼	▼

Minor change Major change

Table 50: Indicative modal transition impact by trip type (BAU: Strategic Sites)

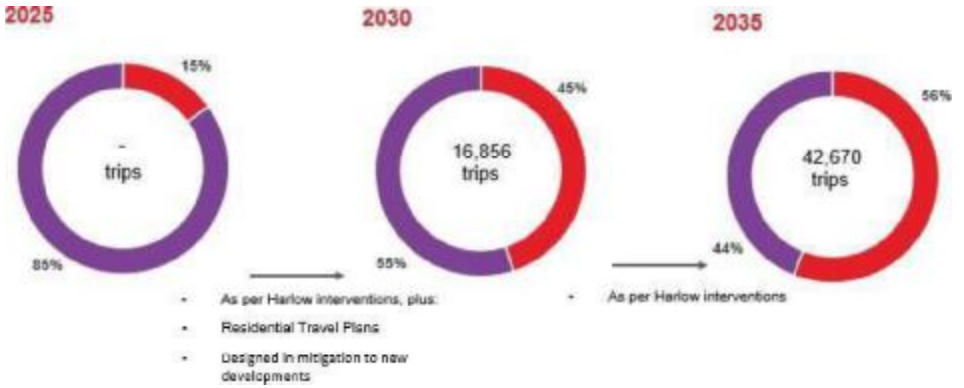
By 2040s:

68,320 additional total daily trips

40,992 additional daily trips by active and sustainable modes

27,328 additional daily trips by car modes

60% active and sustainable mode share



9. Summary

9.1 Delivery Themes Pathway

The recommended delivery pathway (combined for all themes) for HGGT to 2040 is shown in Table 51 and Table 52. As described in Section 7, there are a number of short-term 'mobilisation' activities that should be targeted for commencement and completion in 2024-2025 to enable the delivery of this pathway.

A series of engagement programmes, targeting schools, businesses and local residents, will be critical to supporting the behaviour change necessary for the desired modal transition. This will set the foundation to achieving stakeholder buy in which will be critical to achieve the modal transition vision. It is vital that decision makers understand that the modal transition objectives will not be achieved through infrastructure measures alone.

Post-implementation monitoring of all projects through the collection and analysis of data will be essential to determine if a project has resulted in the desired behaviour changes. Implementation lessons learnt through an evaluation process will also be useful to inform future action and serve as a justification for future funding applications.

Overall progress towards achieving the modal transition objectives can be informed through a periodic (annual from 2024 is recommended) travel survey.

9.2 Illustrative Sequencing for Gold Scenario

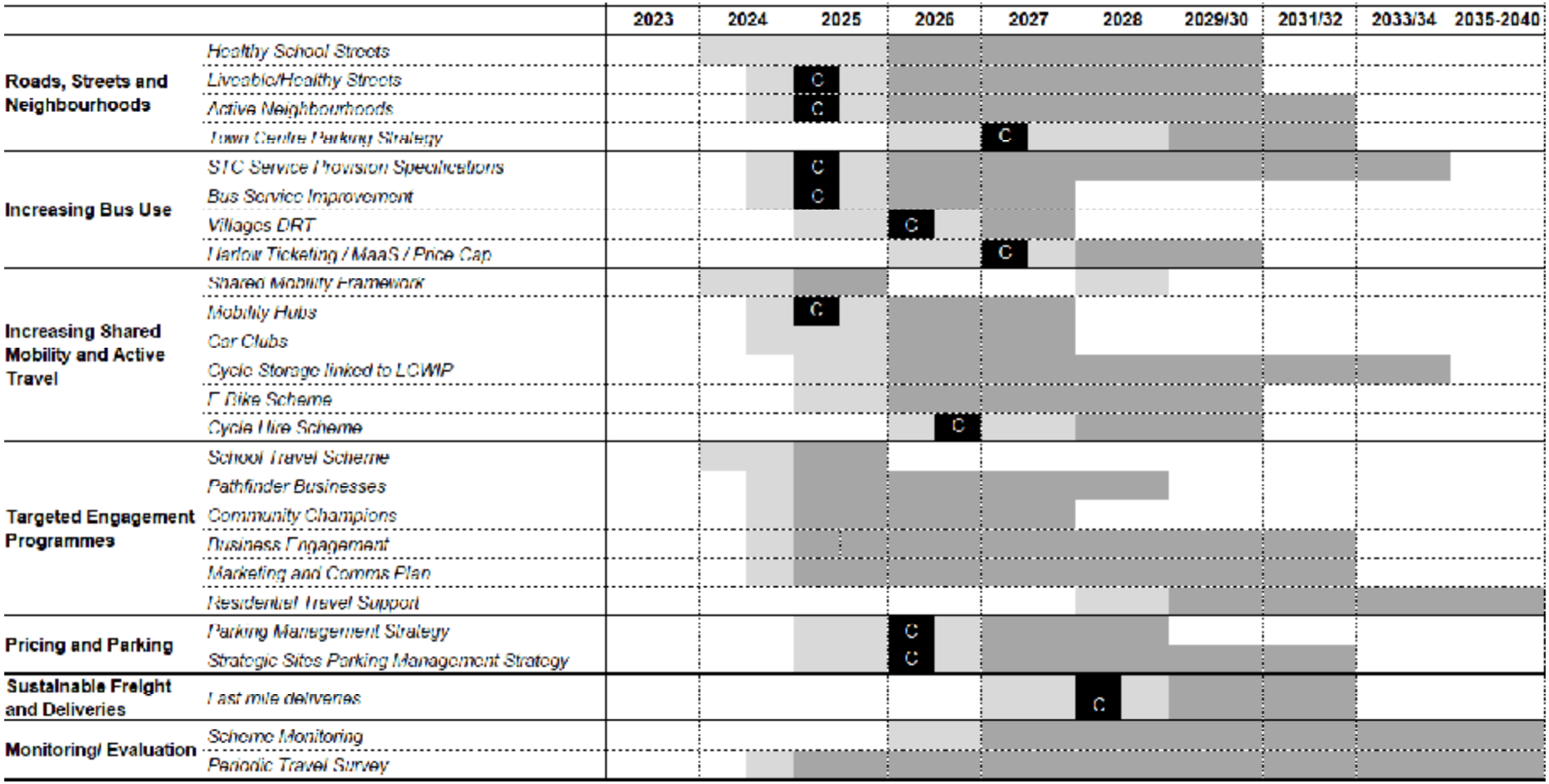


Table 51: Delivery themes pathway

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9.3 Combined Delivery Pathway

The delivery themes pathway has been overlaid with the existing HGGT work plan (key site delivery and infrastructure delivery and enablement timeframes). This ties together the schemes that are already planned with the recommended supporting interventions required to meet the modal transition objectives.

The mode share and trip demand information located in the top section of the delivery pathway provides an indication of the estimated implications of the delivery of the schemes in line with the expected housing delivery trajectory.

The scenario shown in the delivery pathway is most aligned to the Exemplar scenario (refer to Section 8), with continuous delivery and implementation of a range of interventions and programmes to support the gradual and sustained modal transition to active and public transport.

HGGT will need to assess the deliverability of the supporting interventions under the delivery themes pathway with respect to their resource constraints.

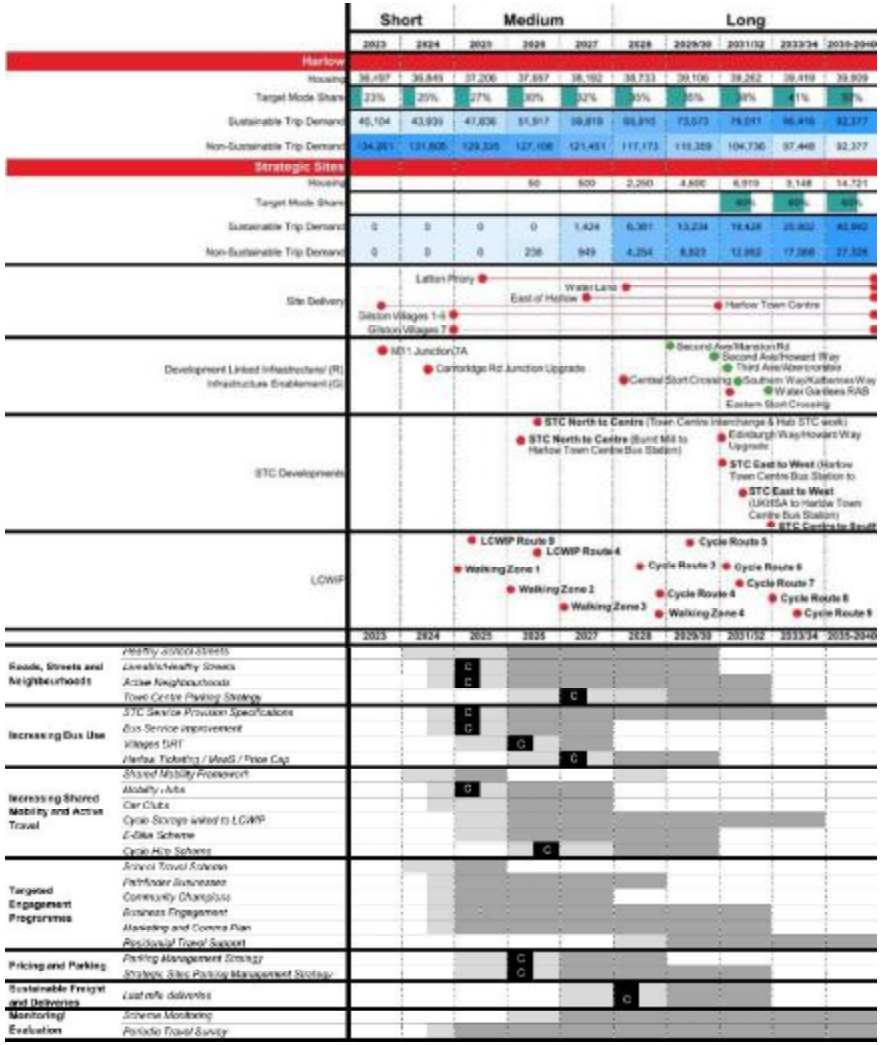

Table 52: Delivery pathway

9.4 Conclusions, Recommendations and Next Steps

This Framework has set out a prioritised pathway of transport focused interventions to achieve the modal transition necessary to meet the ambitious objectives of the HGGT Transport Strategy. Both short term (next 2 years) and long-term (up to 2040) actions have been included. It should be used by all HGGT stakeholders and decision makers to enable them to make an informed choice, and have a view on, the pathway to the achievement of the modal transition.

Important trade-offs will have to be weighed up by decision makers to ensure that sustainable development and mechanisms to facilitate sustainable travel are prioritised above other policy areas.

A strong legacy of collaborative working across partnership councils, developers, third parties and all involved stakeholders will be critical in determining the success of this Framework. In particular, HGGT partners will have to work in close collaboration with developers to deliver well-designed places within the Strategic Sites that prioritise active and public transport use for new residents.

The short-term action plan is a list of the most effective interventions, where delivery should be commenced as earlier as possible to have the greatest chance of success.

The long-term delivery pathway should be adaptable and flexible to overcome potential future uncertainty. However, it is crucial that the most significant interventions, and the plans and strategies required to deliver these, are discussed and developed now in order to best address the challenge of modal transition.

The key **recommendations** from this Framework in order to meet the ambitious modal objectives are:

- The delivery of an **exemplar programme of transport and movement related programmes** is critical for the success of the Framework and achievement of the objectives. There needs to be a **single dedicated resource/appointed officer** to ensure this Framework is delivered.
- HGGT partner councils and members need to work towards a step-change, to impact movement in terms of both **demand and supply.**
- A key condition of this Framework should be to **ensure that it is regularly monitored and evaluated,** to ensure progress is being made against achieving the targets.

The key **next steps** for this Framework are:

- **Appoint** lead officer and dedicated resource to deliver on the Framework.
- **Socialise** this Framework with key stakeholders.
- **Coordinate** the inclusion of recommended interventions within the **HGGT** work plan.
- **Incorporate** prioritised activity and costings within the business plan for next financial year.
- **Commence** delivery of short-term action plan.
- Develop and enact a robust **monitoring and evaluation plan,** to ensure Framework is kept live and regularly updated.